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WHAT OF THE BLIND?

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Vol. 2

What of the Blind?

A SURVEY
OF THE DEVELOPMENT AND SCOPE
OF PRESENT-DAY WORK
WITH THE BLIND

Edited by

HELGA LENDE

☆ VOLUME II ☆

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Preface

THIS book is intended as a companion volume to *What of the Blind?* recently published by the American Foundation for the Blind.

The first volume was brought out in answer to a long-felt need for a convenient reference work to put in the hands of professional workers, board members and lay persons desiring general information on work with the blind. The subjects treated were mainly of a general nature as will be seen from the table of contents appended to this book.

Volume II covers problems of a more specific nature, dealing with subjects not elaborated on in Volume I, as well as presenting a picture of recent advances and developments. In the selection of topics we have been guided by suggestions received from leaders in the field, hoping that this in a measure might contribute to making the two volumes *together* a representative source for information on work with the blind.

As in Volume I each chapter is followed by a short list of suggested readings which will serve as a guide to further study.

THE EDITOR

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WHAT OF THE BLIND?

This Business of Being Blind

CHARLES MAGEE ADAMS

I HAVE never seen an airplane, a tractor, a dial telephone, an electric refrigerator, rayon, cellophane, or stainless steel. The last automobile I saw was a one-lunger with the crank at the side. The last movie I saw had St. Vitus dance. Though I have been married fifteen years I have never seen my wife. The reason is simple. I have been totally blind since boyhood.

To you who can see, the meaning of that will be anything but simple. Of all physical handicaps, blindness remains the most puzzling, bewildering and incomprehensible to those who have not experienced it.

It would be strange if it were otherwise. Sight is the master sense. The implications of losing it strike too deep and reach too far to be grasped vicariously. Moreover, intelligent understanding is clouded by half-truth, myth and emotionalism which distort objectivity. Nevertheless my assignment is to explain what it means to be blind. It might be easier to make a Cuban understand what a blizzard means.

In addition to natural difficulties there is the devil of generalization. Blindness never means the same thing to any two people. For instance, there is Hulbert L. When an accident snuffed out his sight he was fifty-five. A business executive with robust health and exceptional ability, he already had a handsome fortune and an assured social position. His range of cultural interests was wide. His friends were many, his family loyal and intelligent.

On the other hand, Paula K's. sight, never par, failed gradually by the time she was seven. She had always been a

sickly child, slow to learn. Her slovenly parents, who liked being on relief, resented her blindness. So did her yammering brothers and sisters.

It would be absurd to lump these two together merely because they lost their sight. As with all personal problems, the individual is decisive. Yet generalization is unavoidable, and, fortunately, the sightless have enough in common to make its risks worth taking. Regardless of the individual, blindness changes just about everything. It means a complete sensory revolution. It looses a bull in the emotional china shop. Its physical consequences are far-reaching. It calls for drastic social readjustments. It produces a shattering economic explosion. Even recreation is greatly altered. Moreover, these changes are not successive or separate. They are simultaneous and interactive.

Perhaps the most fundamental, and certainly drawing the most questions from the seeing, is the revolution produced in the sensory life. Normally, sight accounts for 80 to 90 per cent of all impressions. So it is small wonder that the seeing are intensely curious—and confused—about what happens when this broad avenue is closed.

The answer may be too simple. Blindness merely means a lack of sight. Other faculties develop special skills which take over the load in so far as they can. If you ever broke your right arm that should be clear. For the first few days you tried to do things with your right hand, only to find you couldn't. Then you began using your left. At first it was awkward and unreliable. But gradually it learned to do things it had never done before, and do them well.

The blind make much the same shift in sensory perception. At first the brain tries to go on seeing, merely from habit. Other faculties are clumsy and inefficient. But as time goes by the brain refocuses. Other faculties develop new skills. At last they are doing the job as well as they can, considering their limitations.

Two things need to be emphasized. The process is *not* "compensation." Other senses are not made keener by some

magic transfer from sight's unused balance. The change is just natural adaptation. The special skills other senses acquire were always possible. They develop only after blindness because they are needed then.

Further, adaptation will not progress far until the person relies on other faculties. So long as he tries to see he retards their development of special skills. Strange as it may seem, the most useful faculty of the blind is not a sense in the precise meaning of the word, but memory. This is easily explained. The seeing can get along comfortably with a minimum of deliberate remembering. Stray facts can be rounded up by turning to a book or newspaper. Pad and pencil take care of engagements and phone calls. Such visual reminders as clocks, calendars and shop windows jog the forgetful.

But for the blind man most of these props are useless. His comfort, convenience and even safety depend on his memory turning up a mass of detail without external prompting. When the alternative is running your hands over several pieces of furniture, you remember where you left your overcoat. You learn to get it the first time when you can have a thing read to you only once. If the penalty for forgetting is a cracked skull, you remember that workmen left a ladder slanted across the sidewalk. There are few departments of living where memory is not a first line of defense for the sightless.

Among the senses, hearing is the blind man's hard-driven work horse. It supplies perhaps 75 per cent of all the impressions he receives—impressions of things, people and even places. That is not because his ears are keener. Scientific measurements have shown that they are no better, and sometimes much worse, than those of the seeing. They are just used more efficiently, as a matter of convenience and necessity.

Hearing is the blind man's most inclusive sense. Many things can be heard which cannot be touched or smelled: for instance, Niagara Falls or a steam turbine. Hearing is his most perceptive sense. The majority of every-day operations have a self-describing sound accompaniment: e.g., building a skyscraper or the take-off of an airplane. Hearing is his chief

avenue of communication. Without it he would have great difficulty keeping in touch with people, events and ideas. Accordingly, the blind man relies on hearing almost as much as the seeing do on sight. The shift is as natural as breathing through the mouth when one has a head cold.

More than that, he trains his ears to tell him a host of things the seeing ordinarily miss because they are preoccupied with sight. Thus the blind typist is alert to subtle differences in the click which may indicate a defect in her machine. The blind salesman notes the creaking of a chair which betrays restlessness on the part of his prospect. The blind householder who tends his own furnace—and many do—knows the fire has caught by its crackling.

Because the interpretation of audible clues is carried to such a nicety, the seeing tend to overrate the value of hearing. Actually, it is a second-rate sense. It is non-selective. The ears have no focusing mechanism as have the eyes. A desired sound can be separated from others only by mental concentration. This often puts the sightless at a heavy disadvantage. An example is a large dinner party in a restaurant where a band is blaring. Another is the street of a big city with its traffic bedlam. Under these conditions the seeing carry on a conversation by lip reading far more than they realize. The blind snatch occasional phrases at the price of strained attention.

Probably because it lacks selectivity, hearing also has a high rate of fatigue. This is accelerated by the high noise background which has become general, even in the home. The result is that, to make hearing serve him, the blind man must expend much nervous energy. Still, hearing remains the best tool in his sensory kit. The fact that he can make it serve such a variety of ends demonstrates the adaptability of the human mechanism.

Touch is the sense whose usefulness is most overrated, often by the blind themselves and certainly by the seeing. Its sensitivity depends in large measure on the condition of the skin. Perspiration, dust, callouses, or numbing cold can be

as deadly as an eye cataract. This explains why the blind are fastidious about the care of their hands.

The perspective of touch is limited by the length of the arms. That makes the impression of a large object—say a tree or house—fragmentary at best and sometimes grossly inaccurate. Touch can register only impressions of form, texture and relative size. Color, so dominant in sight, is a complete blank, notwithstanding stories which have gained considerable credence.

The fatigue rate of touch is high. Relatively short periods of close attention—finger reading, for instance—produce a dimming of perception comparable to blurred vision. And many things cannot be touched at all with safety: a hot stove, a bare wire carrying several hundred volts, or a running bandsaw.

These drawbacks are mentioned because a wilderness of myth has grown up around the "sensitive fingers" of the blind. They have no power not possessed by everybody. The surgeon who took out your appendix did much of the job by touch. Compared with that, reading braille or distinguishing between coins is commonplace. The special touch skills the sightless develop are unusual only because their necessity is unusual.

In contrast with hearing and touch the usefulness of smell is generally underrated. For the blind man it performs many services, ranging from practical to aesthetic. Unexplained smoke warns him against the risk of fire. The aroma of sizzling onions lets him know he is passing a hamburger stand. A well-chosen perfume—girls please note—is a criterion of feminine glamor.

Yet smell has its limitations. It tires even more quickly than touch. Urban civilization releases a swarm of odors which blot out many useful or pleasant impressions. Motor exhaust, beery breaths and coal smoke are only a few of the offenders. Nevertheless the blind man can sniff out many things that enrich or facilitate his living.

Though seldom thought of as one of the senses, tempera-

ture cannot be overlooked in connection with the sightless. They are more keenly aware of heat or cold because temperature occupies a larger share of total sense impressions with sight subtracted. Also, they seem more susceptible to mental and emotional effects of temperature, probably because sight tends to distract attention from the discomforts of heat or cold.

Of all the perceptive skills the sightless develop the one most difficult for the seeing to understand is orientation. Those who have no trouble fathoming other things are mystified by the spectacle of a blind man walking briskly down the street and turning at the right corner. Indeed, some think it remarkable that he should be able to navigate to his own house, though they do the same thing in the dark.

In all fairness it must be said that some of the blind have added to the confusion by fostering the myth of the "sixth sense." There is no such thing. The faculty of orientation is just another adaptive skill developed by combining normal senses to do a special job.

The most useful of these senses is hearing. Perhaps you have seen a blind man swerve away from a telephone pole or turn in at a shop whose entrance is recessed, without using his stick as a feeler. The explanation is that he heard the pole and the entrance. No, wood and glass radiate no identifying sounds. But they do modify sounds which strike them.

When you talk in a room stripped of furnishings your voice is almost unrecognizable. Your words are reflected from bare walls, floor and ceiling. These reflections produce the difference in tone quality.

The same thing, in less exaggerated form, let the blind man hear the pole and entrance. As he came near the pole the sound of his stick taps changed slightly because part of the sound was reflected by the obstruction. As he came opposite the shop entrance the sound changed again, because the break in the wall of the building ceased to reflect it. The technical name for this is phase difference. The reflected sound reaches

the ear an instant before or after the sound not reflected. That slight difference gives the sound a distinguishing quality.

The faculty of recognizing such differences is not acquired in "a few easy lessons." It comes only by practice and concentration. But it is not mysterious or even peculiar to the blind. The seeing develop it if they are adept at getting about in the dark.

Reflected sound is only one navigation aid for the sightless. That is fortunate, for modern traffic noise makes it much more difficult. Direct sound is often helpful. The slamming of a door may locate a house or the whirr of a meat-grinder a butcher shop.

Touch, in the soles of the feet, is a constant aid. Such clues as gravel tracked across the sidewalk from a driveway are "elementary, Watson." But these are useful only in the right season. Snow or a heavy fall of leaves may blot them out completely.

The sense of equilibrium also plays its part. The slight dip of sidewalks at street intersections is a case in point.

The blind man who goes about much without a guide seldom counts his steps. Variation in the length of stride produces a cumulative error that may be serious. The sense of distance which tells him he has reached a certain point, regardless of other clues, actually is a sense of elapsed time. At least my own experience indicates that.

Now and then, of course, he must use a true sense of direction: for instance, make a nice angle without audible or tangible landmarks to chart his course. But these cases are the exception.

I have put sensory fundamentals first in the hope that they may help the reader over some higher hurdles.

What difference does blindness make in one's internal living? How does it change mental processes, concepts of things, people, and ideas? In short, how does it feel to be blind? These questions probe the core of experience and are far from easy to answer.

For example, there is the matter of "eternal darkness." The

seeing take it for granted that this hoary cliché describes the chief sensation of the sightless. The fact is that the totally blind have no sensation of darkness. Their interior world is one merely without sight sensations of any kind. That is hard, but not impossible to grasp.

Perhaps you have driven through a pea-soup fog. Your headlights were useless. As you became accustomed to the murk you gave up trying to see and half-felt, half-listened your way along the road. At the end you were not even aware of the fog. You simply reconstructed your impressions in terms of senses that were useful. The blind man does the same thing, with this important difference. His lack of sight impressions is permanent.

The seeing suppose they can duplicate the conditions of sightlessness by blindfolding themselves or suffering loss of sight for a few weeks. They cannot, because they retain the power of visual memory. That too fades sharply or is lost altogether with blindness. The speed and degree vary with the individual. Some can visualize colors or familiar scenes and faces for a long time. But as a rule visualization ceases two or three years after the loss of sight. This is a normal process of association atrophy. No longer fed by the act of seeing, sight associations are gradually smothered out by stronger and fresher associations of sound, touch, smell, *et al.*

So the blind man's mental world is simply one devoid of sight and its vicarious equivalent. A strange, eerie place? Only because it is different from the seeing norm. Certainly it lacks neither clarity nor definition.

"It was Saturday afternoon and spring had come to Main street. The sun had an intimate warmth that made the cool spots under store awnings welcome. Children romped gleefully between groups of shoppers who had paused to ask how the folks were. In the flat above the jeweler's a woman was singing 'Dinah.' A boy took up the tune while he dragged boxes from a truck whose engine lisped lazily. The sing-song of the auctioneer selling second-hand furniture rose to a satisfied crescendo with 'Sold!' The sweetish sharp smell drifting

out of the drugstore seemed more distinct than usual. On the street the tar in the new patches was soft under foot."

There is not a word here that describes in terms of sight. Yet the total impression is probably as clear and accurate as you would get by seeing.

That is typical of the impression the sightless form of a room, a countryside, a city. Necessarily it is not the same impression the seeing get. But the essential feel, mood, character of the place will be strikingly similar.

Impressions of people are something else again. Of course the sightless identify people by their voices. Were it not for the amazement this causes it could be dismissed as the simple matter of association which it is. Time, place, and characteristic greetings as well as voice peculiarities are determining factors. So is the condition of the mental switchboard which must close the association circuit. Last week, for example, I instantly recognized the voice of a chap I had not met for fifteen years. And an hour before I muffed the voice of another chap I meet almost daily.

But, identified or not, a voice is never disembodied. It reflects every physical factor that gives the person individuality: age, size, health, even such intimate details as pregnancy. More than that, it mirrors the whole range of human emotions, sometimes with micrometer subtlety, again with thundering candor.

So for the sightless, the voice is an excellent channel for communicating personality. The implications of that should be clear. Doubtless you are familiar with the voice of a radio performer whose photograph you have never seen. Merely by hearing him you know what sort of a fellow he is. But you construct a visual image of him. And the blind man cannot.

To him the voice and only the voice is the person. It is not just its quality, what it says or how it says it. It is all these and their significances rolled into a complete, instantly perceived whole.

Sight impressions are different only in that they make use

of another sense. You probably are not sure whether John Doe has tight ears or big-knuckled hands. But you can recognize his walk at fifty yards, and you know whether he would make a desirable dinner guest. Similarly, I can't tell you Jane Doe's favorite color or how she does her hair. But I can spot her gurgly laugh in a roomful, and I know why she couldn't make a go of her marriage.

No matter which sense furnishes the materials, personality is more synthesis than analysis. The sightless merely weave their concept from a different set of perceptions.

As far as "sizing up" an individual is concerned, the net result is about the same. In fact, the blind may have something of an edge. The seeing trust so much to appearances that they often miss voice overtones that betray the real person.

Naturally, the fact that he can neither see nor visualize modifies the blind man's strictly mental processes to a great extent. Familiar objects are associated with whatever impressions of them he can receive. Thus satin stands for smoothness rather than sheen. An oil burner suggests the slick, sweetish smell of its fumes, not searing flame.

Many things ordinarily visualized must be reduced to what a professor of mine used to call "brute memory." The seeing can recall the spelling of a word, the route a highway follows, or the circuit of a radio oscillator by turning to a mental picture. But the sightless must remember by main strength.

For the same reason they must grasp a wide variety of ideas merely as intellectual facts without sensory handles. The structure of the atom, Gothic architecture and the economic cycle cannot be translated successfully into sensations of hearing or touch.

To the seeing, the emotional results of blindness appear to be chiefly shock. There is much to warrant that. Particularly when the loss of sight is sudden, the jolt is severe. But the important emotional results of blindness are lasting.

That is normal and inevitable. Psychiatrists recognize that any major physical disability causes permanent changes in the emotional makeup. It is difficult to generalize about those pro-

duced by blindness. Much depends on the individual and his environment, particularly the intangibles of temperament and family background. At the same time, some things are true of most cases.

For example, the sightless live at a higher nervous tension than the seeing. Sensory deficiency keeps attention at concert pitch. Everything demands greater concentration. Even personal safety calls for eternal vigilance.

When you see a blind man swinging down the street he may look completely at ease. As a matter of fact he must be ready to halt or swerve suddenly to avoid some unexpected obstacle. This necessity of expending more nervous energy on the mechanics of living means quicker fatigue, hence the greater likelihood of irritability or instability.

More important, however, is the sense of inadequacy with which the blind man must cope. No matter how considerate his friends and family are, this is thrust upon him constantly in one form or another. The chances are that he cannot earn an adequate living or get about as freely as he would like. Many home chores are out of the question for him. Much of his time must be spent just waiting. He must depend on others for a host of personal services: to read his letters (unless they are written in braille), to tell him whether he got hold of the right necktie, even prepare some of his food.

Under this battering it takes stern self-discipline to avoid such inadequacy responses as self-pity, rationalization or outright neurosis.

There is a widely held notion that the blind are "always cheerful." If it were true this would be significant chiefly as a defense mechanism. And it is not true. Depending on individual reactions, the sightless are likely to be whining, fawning, clinging, sullen, bitter, resentful, opinionated, dictatorial, demanding; in short, hard to live with.

This is not a justification of funking or ill-temper. It is simply an explanation of behavior patterns traceable to a physical handicap. Emotional problems are the most difficult the sightless have to solve. They remain in spite of economic

independence, physical health and satisfactory social adjustment, because they touch the most intimate phases of living.

Even sex does not escape. Here the drive of normal desire collides with practical obstacles. Frustration, unless channeled into a sublimation, may produce fantasy or worse introversions. On the other hand, a marriage which promises well may be driven on the rocks by emotional instability in a relationship which calls for delicate balance.

Physical health is so closely associated with emotional health that no hard and fast line can be drawn between them. Certainly that is true of the sightless. Emotional blocking makes neurasthenia or functional failures rather common. In less extreme cases the physical and emotional tend to form a vicious circle. Inactive living creates mental lethargy, and in turn lethargy creates inactivity. So the blind man who has an interest, or better still a job, is more likely to keep fit.

Sometimes physical effects have no emotional background. Posture is an instance. The sightless tend to stoop because they have no visual standard for checking their stance. They must learn correct posture deliberately.

Near the outset I remarked that the effects of blindness are simultaneous and interactive. Nowhere is that shown more clearly than by social adjustment. In his contacts with the seeing the blind man is at a heavy sensory disadvantage. Emotional jams are likely to disturb his poise. And his independence of action is sharply limited. The convergence of these produces a peculiar set of handicaps.

On entering a room the blind man cannot appraise a situation quickly. Sometimes he cannot even be sure who is present. He cannot easily escape a bore or approach a person he wants to meet. Even conversation may present difficulties. Much casual talk is about things seen, as while driving or when photographs are being shown.

When the sightless talk at any considerable length they have no ready check on the response of their hearers. The seeing can watch faces. For all practical purposes the blind address a vacuum. All contacts are two-way, affected by the

attitude of both parties. This is peculiarly true of the sightless. For their social adjustment is shaped—often warped—by the attitude of the seeing. Human nature being what it is, the reactions of those who can see to those who cannot cover a wide range. At one end are those who consider the sightless also paralyzed, deaf and dumb; who discount the ability of the blind merely because they are blind; who settle any debatable point with the pronouncement, "Well, I can see it." At the opposite end are those who regard the most commonplace things the sightless do with wide-eyed awe, or inspire the prayer, "Lord deliver us from those who describe everything to us." Between are the great majority who treat the blind as fellow humans, giving and imposing no odds.

Morons seem to feel a kinship of unfitness for the blind. Children are a baffling contact problem. Naturally, they cannot grasp the implications of blindness.

But the most difficult attitude of the seeing the blind encounter is revulsion. It has nothing to do with culture or intelligence. An instinctive repugnance raises a barrier to normal contact. The probable cause is emotional. Subconsciously, those who have this feeling fear blindness for themselves and hence shrink from reminders of it.

This is not to suggest that the seeing are wholly responsible for unfavorable attitudes. The blind themselves often create them.

These attitudes are important because they complicate the social adjustment of the blind. They demand restraint, ingenuity and a sense of humor to avoid further inadequacy responses. For the blind man's adjustment problem is to make the seeing forget he is blind, but not to the point of penalizing himself.

Of all the problems created by blindness the most stubborn and general is economic. There is no occupation where the sightless can compete on equal terms with the seeing. We shall emphasize here its human angle.

Inability to earn an adequate living is serious for the blind man because it aggravates his emotional difficulties. Regardless

of income he must depend on others for many services. If he must also look to them for support his sense of futility will be far harder to combat.

In less degree, the same might be said of recreation. Most of the popular hobbies and sports are closed to the sightless. Those they can share with the seeing often put them at a social disadvantage. Bridge is an example. Using braille cards, the blind player need ask no technical odds. But he does need the co-operation and patience of others.

When considering the effects of blindness it should be remembered that modern technology has done much toward mitigating them. Today the sightless have many useful tools, unavailable as recently as a generation ago: a plentiful supply of braille matter, watches which can be read with the fingers, the typewriter, the Seeing Eye dog, and, most important, the Talking Books.

Radio would have a high place among these aids were it not such a mixed blessing. For the blind it is a source of much that is otherwise beyond their reach. But it also becomes an audible narcotic, smothering initiative with the soothing syrup of effortless diversion.

The result of these special aids is to make the life of the blind more interesting, comfortable and efficient. But when they have done their utmost the fact remains that blindness is a 25 per cent liability. That is not a mathematical error. Though sight is one sense in five, its loss inevitably means a further loss of efficiency. If the sightless can do a thing at all it takes longer or costs more effort.

Against this liability certain assets can be set down. The blind man is spared the affront of roadside billboards, the madness of recent styles in women's hats, and the barbarity of scarlet finger nails. Some of the seeing may consider that worth the price.

And blindness has certain compensations: a keener pleasure in the feel of fur, silk or a deep-napped rug, the smell of coffee on a frosty morning, the sound of a lovely speaking voice or

the rich notes of a wood thrush, the virile caress of wind-blown snow.

To some, the implications of all that has been said may be disturbing and even bleak. If so, it is not because my purpose has been to make blindness appear worse than it is. On the contrary, I have tried to treat the facts as objectively as first-hand experience will permit. For objectivity is the only sound approach to a subject barnacled with emotionalism and fatuous nonsense.

What then does blindness mean as something to be lived with day by day?

In one of his masterly sermons Dr. Harry Emerson Fosdick remarked that "Nobody ever *finds* life worth living. One always must *make* it worth living."

That goes for everybody, for the blind a little more so.

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Suggested Readings

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The Blind Child and His World

BERTHOLD LOWENFELD, PH.D.

WE ARE passing the campus of a school for the blind and pause for a little while to watch the children at play. Some are walking arm in arm and chattering, some are running about, others are sitting on the lawn, amusing themselves. Here are a few boys climbing up the Jungle Gym, and there in a sandbox the younger ones are building a tunnel through a mountain. Two boys are sitting in the shadow of a chestnut tree and have apparently given themselves up to a world of thought. Two youngsters, having a little difference of opinion, are trying to solve it by force. All of which seems quite normal, and, as a matter of fact, many people pass by without paying any attention to this familiar scene. Some may stop and express their surprise on discovering that the children are blind—they seem so normal! How can they act and behave as they do; how can they run around and play as they do; what are their discussions about and what is going on in their little heads? Is there anything inexplicable or supernatural in this scene, as would have been believed years ago before our realistic scientific approach cleared the way for objective questioning.

We have at our disposal three sources of reliable information about blind children from which we may draw conclusions. First, observation and explanation of the behavior of blind children in their everyday life situations; second, the psychological experiment in which situations are created whose control and study offer answers to the problems of the world of perception and imagery, the behavior and emotions of blind children; and third, the collection and interpretation of objective manifestations of blind children represented by their writing and modeling.

"What is the world of the blind child like?" This comprehensive and fundamental question cannot be answered satisfactorily and probably never will be. It appears to be as impossible for the seeing to imagine the world of the blind as it is for the blind to really understand what it means to see. We are able to secure partial clues; we may try to find out what influence the lack of sight has on the construction of a composite picture of the world, but we are not really able to achieve a true representation of it. This should not, however, discourage us in our attempts to accumulate data and find a workable theory since we know that child psychology, in general, is confronted with these self-same difficulties. Although we ourselves have experienced childhood, and the scientific literature on this subject is very extensive, the task of depicting and describing conclusively the world of the child is still far from completion.

Before engaging in a discussion of the problem itself, it should be understood that we shall consider as "blind" *a child who is and always has been totally blind, or who lost his sight completely at such an early age that visual images have faded to such an extent that they cannot be used in the acquisition of new conceptions.* Apparently this is the case with blind individuals who have lost their sight before approximately five years of age. Persons blinded later in life may visualize their sensory impressions (tactile, kinesthetic, auditory, olfactory) just as the seeing do.

A theory which has strongly influenced the early stages of scientific approach to blindness and served as a starting point for objective measurement was that of sensory compensation. According to this theory, an individual deprived of one sense is compensated by the vicarious functioning of the other senses; the absence of vision should lead, of necessity, to a higher degree of acuteness in the remaining senses, the unimpaired senses naturally taking over the tasks and functions normally performed by the sense of vision. Scientific measurement and a comparison of the results secured from blind and seeing, however, have clearly proven that there is no dif-

ference in sensory acuity in favor of the blind. Their sense of hearing is no more acute; their various tactual sensitivities (pressure, cold, warmth, etc.) are in no way better than those of the seeing child. But what explanation is to be offered for certain extraordinary achievements commonly attributed to the blind? Some of these, without doubt, belong to the realm of fairy tales. Certainly the idea that blind children are able to distinguish color and the claim that they can read ordinary print because of their highly refined sense of touch must be classed as fancy rather than fact. On the other hand, there are definite accomplishments which we should consider carefully. Take, for instance, the assumption that the blind as a group are more musical than the seeing. As a matter of fact, musical education is greatly stressed in schools for the blind, and a musically gifted child is almost certain to receive proper training because his ability is discovered early and carefully cultivated. If the schools for seeing children would observe the same practice, the results, without a doubt, would be equivalent. Blind children are taught braille, an elaborate system of reading and writing in which single letters are represented by various combinations of six embossed points. The ability to read braille is considered by many to be the result of a greater acuity in the sense of touch, so surprising is it to watch the reading fingers of a child gliding along the dotted lines. It takes, of course, a great deal of concentration and training to attain a reasonable speed in braille reading (by reasonable we mean the allowance of two or three times as much time for touch reading than for visual reading). Exact measurement of the thresholds for pressure sensation by the use of weights and for spatial estimation by the method of two-point stimulation have revealed that there is practically no initial difference between seeing and blind children. It is interesting and almost paradoxical to note that those with the highest degree of tactile acuity are not necessarily the best braille readers; for unusual sensitivity of the finger tips may be a handicap when imperfections are present in the surface of the braille paper used. Efficiency in braille reading is also affected by such factors as

temperature, perspiration and fatigue, although it has been shown by experiments that braille reading in itself is not particularly fatiguing.

Another widely discussed problem is that of orientation and of the "obstacle sense"—how does a blind child find his way in the home, the school, and with certain limitations, on the street? How is he able to avoid obstacles in his path? Again it is not a special sense (the "sixth sense" or "obstacle sense" has been invented as the explanation for the "miracle"), but apparently the co-operation of different sensations and their interpretation. In walking, the feet not only take steps which may lead up or down or upon the same level but they also feel the quality of the ground—through the sense of touch obtaining certain cues which serve as guides in familiar and unfamiliar territory. Changes of temperature and probably air pressure caused by large objects, such as walls or trees, may warn the blind of an obstacle in their path. The sense of smell is stimulated from many sources and, perhaps most important of all, the sense of hearing is constantly active in observing the sounds and echoes of footsteps and in interpreting other sounds and noises of all kinds. All this contributes to the orientation of the blind. How many senses he may use in order to accomplish what the seeing grasp at one glance depends entirely on the situation and what stimulation it offers. It is understood, of course, that only constant practice and persistent application produces the skill necessary for an efficient interpretation of the multiform sensations confronting the blind child.

We have already mentioned the fact that exact measurement of hearing reveals no higher auditory acuity, and we should like to point out another function of hearing which is perhaps the most important of all senses for the blind. Hearing is the "social sense" of the blind. Inasmuch as they cannot watch the behavior and reactions of people visually, their major means of establishing and maintaining social contact is through their interpretation of the character and content of voices. In this, the blind achieve remarkable skill not only in

so far as they develop a better memory for voices, but they are also able to conclude from voices the emotional status and responsiveness of those with whom they come in contact.

Now for the last disillusionment—the "wonderful memory of the blind." So much has been reported on this phenomenon that it seems almost cruel to destroy this stronghold of belief in innate superiority. Scientific measurement, however, of the different manifestations of memory "does not reveal any general compensatory superiority in the memory of blind children," and Dr. Samuel P. Hayes concludes "in memory as in sensation compensation is not a gift but the reward of persistent effort."

We have reviewed the fields of sensations in which the claim for superiority was tantamount to the presence of a higher degree of measurable efficiency. We have explained that while there is no evidence for any measurable innate superiority, the actual higher degree of efficiency is the result of attention, practice, adaptation, and an increased use of the remaining faculties.

There is one field of sense perception, however, where blindness enforces an entirely different way of application; namely, the tactual perception of space—space taken in its broadest interpretation as including everything extending into three dimensions. Vision supplies the seeing with more than nine-tenths of their conceptions. A major question in the psychology of the blind is therefore—how does the blind child acquire a workable knowledge of the surrounding world? Only one sense gives to the blind the actual experience of objects; namely, the sense of touch. Other senses may offer certain clues, but the object itself remains unknown until the blind child comes in actual contact with it by touch. This sense must not only function as a receptive medium for surface qualities, pressure and localization, but is also the fundamental source of spatial perception.

A vast amount of literature has been written on the problem of tactual space. Theories denying the possibility of acquiring a conception of space by touch have been set forth along

with theories analyzing the different kinds of space perception by which blind individuals acquire a tactual knowledge of space and objects. Among those who have specialized in the psychology of the blind, however, the existence of a tactual space has never been questioned. It was only the process by which space perception is acquired that was thoroughly investigated because of its outstanding importance. There is a general consensus of opinion that the tactual space of the blind is different from the visual space of the seeing. Two types of tactual perception by the hands have been differentiated for the purpose of psychological analysis. Enveloping touch, by which small objects are enfolded by letting either one or both hands observe the object, is a type of tactual perception which has been called "synthetic" because the form of the object is secured as a whole simultaneously. A second type of tactual perception is applied to larger objects which extend beyond the limited scope of one or both hands. Here, the moving hands follow the outline of the object and, if it is very large, the whole body may actively participate in the process. This method of perception has been called "analytic" because it gives successive impressions of parts of the object. The problem of whether and how these separate perceptions lead to a unified conception has been extensively discussed and investigated. A mental process of "contraction and expansion of tactual space" is given as one explanation, and the perseveration of the earlier perceptions to be combined with the later ones into a spatial and temporal continuum is postulated by another theory. Whatever the explanation may be, the fact that blind children are able to reproduce all kinds of objects by modeling and handwork and achieve a reasonable similarity in their products is evidence that the blind child unifies different perceptions into one total concept of an object. There are two disadvantages inherent in perception by touch; one, that certain objects cannot be observed at all because of their size or inaccessibility; the other, the very limited possibility of observing moving objects.

Let us consider now a basic difference between the nature

of vision and the nature of hearing and touch as a means of acquiring conceptions. Vision, the major sense faculty of the seeing, relays perceptions with a high degree of reality and accuracy. The sense of hearing which serves the blind as the main source of information brings to them only an abstract form of emanation which must be supplemented by tactual perception in order to become a concrete experience. This discrepancy causes what is known and discussed under the term of "verbalism," which is the substitution of words for experiences derived from real observation. One type of verbalism is, without a doubt, unavoidable and refers to words and ideas whose use is essential to the blind child if he is to be successful in his social contact with the seeing. It is, for instance, understandable that the blind child uses the word "fire" without an adequate appreciation of its meaning. Warmth is the only effect he feels and this sensation is in no way limited to fire; a hot radiator creates the same impression. For the sake of communicating with the seeing in their terms, the blind child must also adopt the most common associations of objects and their colors, for instance, green leaves or red blood. The child grows up with these forms of "social verbalism" and they are a function of his memory as well as of his concepts. By his concepts, we mean in this case that the blind child substitutes certain secondary qualities which are perceptible by him, for the original object which may be characterized by very different elements for the seeing. The color blue, for example, might be associated with a blue sky and all or some of the different sensations caused by fine weather may function as a substitute idea for the color blue.

In principle, however, the attention of the blind child should be directed to those objects and qualities which he can properly understand rather than to those which must remain for him mere words without meaning corresponding to reality. There are a surprising number of things which the blind child should be brought into direct contact with and a great quantity of objects and their qualities which can and ought to be observed if words are to assume real meaning. The canary in

the home of the blind child might be vaguely known to him as a singing bird whose color is reported to be yellow. How much would it mean if he knew that the bird was a handful of feathery, warm life and had been able to observe on a model the body and structure peculiar to this little bird. Such diversion from the abstract to the concrete is one of the main tasks of education in schools as well as in the home, a weighty task indeed if we consider that education must make up for most of the impressions which nature itself offers to seeing children.

Another welcome effect of this desirable tendency to concreteness in the education of the blind child is his diversion from fantasy life, a strong inclination for which is prevalent among blind children. It is only natural that a mind, not sufficiently supplied with real conceptions, turns to the adoption of fantasy substitutes and to the construction of a world of unreality. In such a world no limitations are imposed upon the blind child, and he may escape to it from the difficulties encountered in actual living.

Blindness also creates certain behavior patterns which are frequently developed during childhood and characterized as "blindisms." The lack of stimulation from the external world furthers the child's concentration on the self and promotes the exercise of self-stimulation. Such "bad habits" as the swaying of the body back and forth, shaking the head rapidly, or keeping the fingers constantly in motion may be effectively counteracted only if the cause of their origin is eliminated. The blind child needs to be supplied from earliest childhood with opportunities for action in all its different forms.

If we now review all the facts surveyed we may somewhat appreciate the additional task which is imposed upon the blind child and his educators. As yet, however, we have not touched upon the emotional problems created by blindness. The literature on this subject is very limited, and further study is necessary, but certain facts have been fairly well established. "The congenitally blind, never having known experientially what vision is, suffer no feeling of privation save as it is defined for them in their social relations." Blindness does not mean

"life in darkness" to the blind child because he does not know what darkness means, but obtains information on his deficiency by comparing the effect of his own actions with those of the seeing. While still engaged in building up a world which is based on his own needs and development, the blind child must adjust his personality to living in a community of the seeing. This process of adjustment is the central task in the social education of the blind. It may drive the blind child into a world of unreality and fantasy in which he may find compensation for his real or supposed failures. It may drive him into a frenzy of activity and a desire to emulate the seeing, or it may lead him to find the right balance by recognizing his individual limitations as well as the possible accomplishments in his own sphere of activity. It is often claimed that blindness causes characteristic forms of reaction, although the same types of behavior are to be found in seeing children and may result from any number of causes. The blind child may, for example, develop a feeling of inferiority because of his limited participation in the social life of his group. This may also be true of a seeing child who is ashamed of his small stature, the poverty or social standing of his parents, etc. There is a common tendency to be too rigorous with the deviations of the blind child by considering his reactions as abnormal because they are known to be caused by blindness. Yet the same deviations would be considered well within the broader limits of normality for seeing children. It is of paramount importance to bear in mind that the blind child is first of all a child. His behavior and reactions are necessarily to be considered under this premise and his developmental needs are to be provided for in compliance with this principle. No simple formula can be given by which the problem of properly educating the blind child may be solved. The rule that "the blind child should know his limitation, but not be constantly reminded of it" may well serve as a guide, but everything depends upon the understanding and sympathetic attitude of the educators, for educating the blind is even more of an art than educating the seeing.

Before dealing with the educational opportunities available to blind children it should be made clear that total blindness, as we have discussed it so far, is a comparatively rare occurrence. Less than 40 per cent of all the pupils in residential schools for the blind show total blindness or only light perception and this condition may have developed, in many cases, during childhood. Furthermore, blindness is frequently only one component of a major deficiency. Congenital or hereditary factors, accident or disease may result not only in blindness, but also in mental and physical afflictions which are bound to affect the entire personality of the individual. This may be true to such an extent that blindness itself becomes secondary in importance as, for example, in hereditary intellectual deficiency where feeble-mindedness must be considered as a far greater personal handicap. Just as the normal seeing child —normal taken in its broadest sense—should educationally and psychologically be separated from the abnormal child, the normal blind child should be considered as such and his problems not be aggravated by additional complications.

Educational methods and practices in schools for the blind are largely determined by the fact that the pupils are considered as blind, and do not take into consideration that a large and increasing percentage of the enrollment consists of those with some ability to see and visualize. The partially-seeing child in this group may not be able or allowed to use his vision for such purposes as reading, writing, or handwork, but he does use it in the development of his mental world. His being classified and educated as psychologically blind is, therefore, not justifiable. The range of partially-seeing children extends from those able to perceive only motion to those approximating normal vision. (More than 20 per cent of the total enrollment in schools for the blind have vision better than 20/200 which is generally considered the borderline between pupils for schools and classes for the blind and those of sight-saving classes.) While the former group is closer to the blind child as treated in the first part of this paper, and the latter approaches the normal seeing child, we have in between a wide

range of gradual differentiation. The amount of vision is certainly important, but it is not the deciding factor since increase of vision does not necessarily mean increase in approximation to the mentality of seeing children. This is definitely individual, and we find children with a comparatively high degree of vision exhibiting mental development and behavior patterns similar to totally blind children. Environment, education and probably inclination to certain psychological types of imagery and learning (visual, auditory, motor) are to be considered as influential factors. The complaint, so frequently voiced, that partially-seeing children have greater difficulty with their school work than the blind is to be explained by the fact that partially-seeing children, taught by methods designed for the totally blind, and thereby neglecting their vision, are forced into a development which makes no allowance for the application of one of their most potent sense faculties.

All these facts clearly indicate that the teacher of a class of blind children is not confronted with a homogeneous group of children—psychologically or educationally homogeneous—but has to deal with a variety of personalities limited only by the number of pupils in her class. It is not only for this reason that it has been found practical to have ten or twelve children, and often less, to a class in schools for the blind, but also because of the various additional tasks put upon a teacher of the blind. What educational principles, methods, and tools must the teacher employ in addition to those she may derive from the field of general education? The answer to this question may be summarized by defining the need of the blind child as one of *additional stimulation*. Seeing children bring into the classroom a variety of impressions and experiences which their surroundings offer. Their minds, open to the world at large, are flooded with pictures, sensations and concepts and it is the teacher's problem to utilize this abundance to the best advantage for the development of her group of children. Blind children present quite a different problem. Their enforced seclusion, remoteness and natural tendency to egocentricity must be balanced as much as possible by an

education offering a plentiful supply of material necessary for an adequate understanding of the surrounding world. A teacher of a class of blind children functions as a constant stimulator and "supply officer." It is, of course, important that the material presented be deliberately chosen and prepared. Only then will it enlarge the limited range of the blind child's experiences and materially contribute to the enrichment of his personality.

What types of "creative activity" are feasible for blind children? Besides the usual activities associated with the learning of languages such as composition, play writing and acting, music in all its forms may be enjoyed by the blind child either passively or actively. There is practically no instrument which a blind child cannot learn to play provided he has the necessary talent. Obstacles are involved, however, which impose upon the blind child a much greater effort in acquiring the technique of instrument-playing. The blind child must learn to read a complicated system of musical notation and usually memorizes while reading with one hand what the other hand is to play. Simultaneous reading and playing of scores is naturally out of the question.

Although totally blind children are excluded from activity in the field of graphic arts, partially-seeing children may achieve considerable skill in drawing and painting. Evidence of this is shown in productions of high standing in children's art. As a new field of creative activity, modeling has been introduced and extensively reported on. It has always had a place in the education of blind children, but mainly as a means of reproducing and controlling as well as correcting their conceptions of the tangible world. As a medium of creative expression, modeling provides an outlet for the child's emotions and reactions and its manifestations furnish excellent material for psychological interpretation.

We mention here only in passing that handicraft of various kinds holds an important place, and blind children may become able workers on the joiner's bench, with the turning lathe and the potter's wheel, in woodwork, ironwork, basketry, weaving

and in other forms of craftsmanship. They may also successfully engage in farming, gardening, poultry raising and, to the justifiable surprise of the public, in the mechanics of radio.

It is also within the scope of a conscientious education of blind children to compensate for the reduced physical activity caused not only by the lack of sight but often by the existence of additional handicaps. Gymnastics and corrective posture work, and such sports as running, swimming, rowing, wrestling, ball playing and all kinds of outdoor activities are an important part of the physical program in all schools for the blind.

Finally, we should discuss the various tools which blind children must learn to use in order to keep apace with their educational accomplishments. We have mentioned braille as the system of writing and reading which is certainly one of the greatest achievements in the history of the education of the blind. Nevertheless, "blind children read only one third as fast and write with a stylus only about one half as fast as seeing children having the same number of years experience in school work." This means that the blind child cannot read as much as the seeing child and the enrichment of his experiences derived from such a source is necessarily curtailed. This situation is further aggravated by the fact that blind children must, so frequently, read, where and when seeing children need only experience. It is hoped that the use of the Talking Book as an educational medium will ameliorate this condition. Special devices for arithmetic and geometry and embossed maps for geography are also in use.

The unavoidable limitations imposed upon the blind child make it plain that his educational achievement must fall behind that of the seeing child of the same age and intelligence. An average retardation of 2 to 2½ years has been determined, but if allowance is made for this factor, the general intelligence of the blind child compares fairly well with that of the seeing.

In turning now to the available educational facilities provided for blind children in the United States, we are approaching a highly controversial subject—the relative value of

residential institutions versus that of day-school classes. The arguments pro and con may be found in almost every book on the education of the blind and do not, therefore, require repetition. The controversy was and is based entirely on the opinions and individual experiences of the educators on both sides, and not on objective comparative studies of the educational and social effects of both systems. The present trend may be outlined briefly and indicates that perhaps a compromise may be found. There is no doubt that blindness creates a need for special provisions and training which cannot be satisfied by the usual educational facilities available to the seeing child. Residential schools and day-school classes are instrumental in fulfilling this need. Educators in residential schools are more and more willing to admit to the advantages of day-school classes for the superior blind child, thereby meeting half-way those who claim that even the average blind child would profit by receiving his education in day-school classes. The main argument centers around the idea that day-school classes will do away with the unavoidable social segregation caused by institutional education. Dr. Edward E. Allen, who has devoted a lifetime to the education of the blind, makes two highly significant statements: "The prepared, strong and still tutorially guided blind pupil of the residential school will gain from a change to a public school" and "If I could plan and carry out my preference now, I should conduct no senior high school department but should send every proper pupil of that advancement out daily for such opportunities. . . ."

A review such as this gives us various indications of the basic importance of the educational process for the intellectual and social development of the blind child. One can readily understand that inadequate education may produce a maladjusted personality not adapted to life with the seeing and exemplifying the idea that "blindness changes and utterly reorganizes the entire mental life of the individual." There is certainly a fundamental difference in sensory life which cannot be eliminated, but we must recognize that an adequate educational

process results in an almost complete adjustment of the personality of the blind.

Suggested Readings

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Mental Measurements of the Blind

SAMUEL P. HAYES, PH.D.

IT IS a surprise to many people that there is any need for the application of mental measurements to blind children, and it is equally a matter of surprise that such measurements can be and have been made. In schools for the blind where small classes, a full day's program and intimacy of social relations in dormitories offer unusual opportunities for teachers to become well acquainted with their pupils, one might assume that mental measurements would be superfluous; in fact this position is still held in some schools. But where teachers' judgments and standard measurements have been compared we find the same striking differences of opinion which have motivated the almost universal use of tests in schools for the seeing, and in grades which have been assembled on the basis of teacher judgments alone enormous differences in ability are disclosed by tests. In such grades we are pretty sure to find children who simply cannot do the work, but have been kept on by kindly and over-sympathetic teachers: and we often find children denied promotion because a teacher does not approve of their attitudes, because their work has been "spotty," or because they have not fulfilled her demands in all details, when standard tests show that they are ready for the next grade and may be seriously injured by repeating a whole year's work with little sense of achievement.

In some schools for the blind standard tests have now been used for nearly twenty-five years, and the test movement is rapidly extending to many others. The first adaptation of intelli-

gence tests was attempted by Robert B. Irwin and Dr. H. H. Goddard in 1914; the use of achievement tests was begun by Dr. Samuel P. Hayes in 1917. The primary object of both types of tests is to assist in the educational process, but certain distinctions should be made between them. The chief aim of intelligence tests is to determine the native capacity of children so that they may be scientifically classified in groups of similar ability, those who have very little ability segregated in special classes, and those with superior ability encouraged to attempt a more comprehensive and enriched course of study. Incidentally, intelligence tests may suggest to the teacher plausible explanations of poor work or restlessness and give valuable hints toward vocational guidance. Achievement tests are designed to show how well the children are doing their school work, and when compared with intelligence tests of the same children, serve to indicate whether the children are making reasonable use of their native abilities. Achievement tests are standardized by applying them to large numbers of pupils in different parts of the country, following explicitly the instructions for administering them. They therefore provide standards or norms with which to compare any individual, grade or school; and when given in successive years they measure progress and become valuable aids in the promotion and reclassification of pupils. In their latest development, as diagnostic tests, they facilitate the analysis of school subjects into their elements, thus showing the teacher which parts of a subject need special emphasis with individuals or a grade as a whole; and they may prove the need for changes in the time allotted to certain subjects or parts of subjects. Incidentally all achievement tests may become motivating devices since they arouse the interest of teachers, pupils and parents. If a child of good native ability tests repeatedly well below average in a series of achievement tests, it is hard for him to find alibis, and the teacher is protected from the criticism of parents who cannot understand why their child is obliged to do so much home work.

Achievement Tests in Schools for the Blind

The first standard achievement test to be put into braille was a simple reading test. Reading seemed a natural subject for the first attempts at measurement since so large a part of school work depends upon facility and accuracy in handling braille; and the attainment of reasonable proficiency in reading during school days is fundamentally important for any adult who hopes to keep in touch with the world of people and events. The test selected was easily adapted for testing the blind and its use brought to our attention various facts which have been very important in our tests of other school subjects. Aside from the fact that it proved the possibility of using with blind children standard tests constructed for the seeing, it brought to light great differences in reading rate and in comprehension within grades and in groups selected according to years of school experience and mentality. It also showed that in general blind children read only about one-third as fast as seeing children,—a fact which has been of the greatest importance in the adaptation of all timed tests which must be given in braille. Other conclusions derived from this experiment were that one could not expect blind pupils below the fourth grade to be far enough advanced in reading to take group tests in braille; that standard tests might be expected to show wide individual variations in ability but little sex difference; that late entrance into schools for the blind and the slowness of braille reading might be expected to cause an age-grade retardation of two or more years; that comprehension in reading is correlated positively with general intelligence.

After this preliminary trial with reading, standard tests in other school subjects were adapted at the request of the Efficiency Committee of the American Association of Instructors of the Blind and used in from eight to ten schools by trained testers from the two eastern schools most interested in the movement; and in 1921 the writer published a manual giving directions for administering a long list of tests with the assurance that "anyone who is intelligent enough to teach school,

and who is sufficiently interested to study and follow directions explicitly, can give these tests with a degree of exactness that will suffice for the usual problems of classification." Apparently we were somewhat ahead of the times for very little use seems to have been made of our tests except in the schools where our specially trained testers lived or visited. The second decade of achievement testing in schools for the blind showed a slow but steady increase in interest, articles on tests appearing from time to time in *The Teachers Forum for Instructors of Blind Children*, a magazine started in 1928, and reports on testing being presented at the biennial conventions of the American Association of Instructors of the Blind. Our third decade, beginning in 1937, bids fair to be an era of flowering, marked first by a widespread use of a comprehensive series of tests arranged by the writer and by the independent adaptation and use of various special tests by teachers and principals. After satisfactory preliminary trials with the New Stanford Achievement Tests (Third Revision), the writer, in co-operation with testers in three eastern schools, published detailed instructions for giving the whole series of tests—paragraph meaning, word meaning, spelling, language usage, literature, history and civics, geography, arithmetical reasoning and computation. Paragraph meaning is tested by asking the children to read a paragraph and supply a missing word intended to show whether they have understood it. For example, "Dick and Tom were playing ball in the field. Dick was throwing the ball and ..... was trying to catch it." Word meaning was tested by asking the children to select the one out of five given words which best completes a sentence. For example, "A rose is a box flower home month river." Spelling is tested by dictating a series of sentences containing simple words for the lower grades, and progressively more difficult words as one goes higher in the school. Language usage is tested by asking the children to decide which of two sentences is better. For example, "Apples is good." "Apples are good." Knowledge of literature is tested by asking the children to select from three alternatives the best word to complete

a sentence. For example, "Little Red Riding Hood took cakes to her aunt cousin grandmother." The best answer technique is used also for testing history and civics. For example, "The Pilgrims came from England France Spain." The same formula is used for testing geography. For example, "A state having no seacoast is Maryland Idaho South Carolina." To test physiology and hygiene three alternative answers are offered. For example, "The body is covered by muscles bones skin." In testing arithmetical reasoning ordinary problems are used such as "Charles has six brown rabbits and five white ones. How many rabbits has he?" Of course in all the tests, simple items are given first to encourage the younger pupils; then the items become progressively more difficult, the later ones demanding years of schooling. The tests of arithmetical computation begin with simple exercises in addition, subtraction, etc. and rise to advanced problems in decimals, volumes, areas, and unknown quantities.

The Stanford Achievement Tests are issued in five equivalent forms which were put into braille and made readily accessible to schools on quota at the American Printing House for the Blind. In one school all five forms of the test have been used and at least a dozen schools have reported on one or more testings. These tests have given the teachers reliable pictures of their pupils' work, and where they have been repeated year after year, they have yielded illuminating curves showing the progress of individuals, grades and schools in most of the subjects taught in the elementary school. In schools where the children have been properly classified the curves based upon grade averages have shown the blind just about at the seeing levels, thus proving the possibility of normal educational progress by the blind and the feasibility of testing their progress with standard tools of measurement. Of course curves by chronological or mental age show the expected two or more years retardation, but this is inevitable since the achievement tests have a positive correlation of more than .80 with our adaptation of the Binet intelligence tests which indicate a similar retardation. Also these tests demonstrate the ability of

blind children to adapt themselves to strange new ways of testing—they readily adjust themselves to the use of a short pencil to mark the amount of work they have done on the braille text when time is called, they quickly learn to deal with material put in best answer, word completion or true-false form. On the other hand, they have a good deal of difficulty with matching tests since this technique involves quite a tax on the memory or very frequent rereadings. In general it has seemed wise to give a considerable amount of test material orally. This saves the time involved in the slow reading of braille and accords with the common use of much oral teaching in their class work.

At present a considerable number of standard achievement tests are accessible for use with blind children and can be given by the average interested teacher. Besides the Stanford Achievement Tests and a number of other tests for use in the elementary school, we have a Standard Graduation Examination to show whether the children are ready for high school work, a well-known series of high school achievement tests, and the Scholastic Aptitude Test of the College Entrance Examination Board (which however is administered only under the Board's direction). A number of diagnostic tests and remedial exercises to correct deficiencies have also been found feasible for the blind.

Intelligence Tests in Schools for the Blind

The Binet-Simon intelligence tests had been in use in America for only a few years when their value for the classification of blind children was recognized by Robert B. Irwin, then Supervisor of the Department for the Blind in the Cleveland public schools. In the summer of 1914 he visited Dr. H. H. Goddard at Vineland, New Jersey to discuss the question of adapting these tests for use with children without vision. Taking Goddard's translation of the 1911 edition of the Binet scale as a basis, they struck out those tests which could not be given without the aid of vision, made additions from various sources, and arranged their whole collection of tests in year

groups according to Irwin's judgment of the abilities of blind children. The tests were at once put to use in the Ohio State School for the Blind by Dr. Thomas H. Haines who recast them in point-scale form, and soon afterward Dr. W. B. Drummond tried out the tests in England and Scotland. In Germany Bürklen discussed in 1918 his adaptation for use with the blind following Bobertag's arrangement of the Binet tests.

Group intelligence tests have also been used occasionally in schools for the blind, and since they can be administered by teachers they furnish a convenient survey of the more general abilities of a grade to compare with their achievements in the subjects they are studying. Directions for giving the Pressey Group Point Scale and the Pressey Cross Out Tests were published in the writer's *Manual for Self-Surveys* in 1921, directions for the Otis Classification Test appeared in *The Teachers Forum* in 1931 and directions for the Sangren Information Tests for Young Children and the Kuhlmann-Anderson Group Intelligence Test in 1938 and 1939. All these tests show fairly satisfactory correlations with the individual tests which take much more testing time and have to be given by trained testers, and thus serve as a secondary source of information upon the intelligence of blind children.

Systematic routine testing was started in two American schools for the blind in 1916, and within a few years more than 1100 blind children in ten residential schools had been individually tested. In 1916 the Terman Stanford revision of the Binet tests was published and soon became the standard method of measuring the intelligence of seeing children. Realizing the advantage of bringing our tests into harmony with those for the seeing, the writer prepared and distributed in 1923 his *Scissors and Paste Guide*, an instruction book made by pasting into the Terman guide a limited number of typed slips covering such changes as seemed necessary to adapt the tests for use with the blind. The arrangement of tests was based upon a careful, though incomplete statistical study of passes and failures by age groups, supplemented by the judgment of the psychometrists who had used the tests continu-

ously since 1916. Irwin had realized very early in his work, that some of his tests were unsuitable and that others were probably placed in the wrong year groups; Haines and Drummond had both been much impressed with the importance of degree of vision and the probable difference in mental imagery according to the age at blinding, and had based their arrangements of the tests upon the results of the comparatively small number of pupils who had been totally blind from birth or early infancy. Hayes was inclined to stress the practical need for a scale which would measure all the children who came to schools for the blind, as well as the advantage of comparing them with seeing children of the same ages. His experience had led him to minimize the importance of the age and degree of blinding.

The 1923 guide seems to have served its purpose fairly well but certain deficiencies were soon noted and in 1930 a new guide was distributed. Try-outs with additional tests now made it possible to give a full complement of six tests in each year group with some alternates, and a further study of the increased data on hand justified a still closer approximation to Terman's age grouping. The distribution of the 1930 guide resulted in a much wider use of intelligence tests with the blind, for not only was a program of regular testing and retesting started in a considerable number of residential schools, but many clinics and institutions for mental defectives, as well as braille and sight-saving classes in the public schools now made regular use of our Binet adaptation. In general both the 1923 and the 1930 adaptations produced fairly normal distribution curves when total unselected school populations were tested, and retests after two or more years showed a reasonable "constancy of the I.Q." We had looked forward to obtaining an average I.Q. of 1.00 in each school tested with the 1930 adaptation; actually the average I.Q.'s in sixteen different schools reporting from 1930 to date ranged from I.Q. 1.08 to I.Q. .92. Whether this means that some schools draw their pupils from better intellectual stock than others, or indicates local differences in the reception and retention of

pupils in residential schools, or points to inequalities in leniency of scoring by testers of different training, we cannot at present determine. An extended study of the pupils entering two large eastern schools, where the directors have exercised a fairly liberal policy towards pupils of modest intellectual promise, has discovered little change in average I.Q. during the period from 1915-1935, using our three adaptations of the Binet tests successively. In these two schools the median I.Q. curve oscillates from year to year slightly above or below I.Q. .90 as a center. For our whole group of sixteen schools, involving tests of 2192 pupils with the 1930 adaptation the average I.Q. was .9825, S.D. .1970.

The two commonest criticisms of our adaptations of the Binet tests have been: a) that no thorough-going standardization of the tests for the blind has ever been published and b) that nobody knows just what value to give to the resulting I.Q., i.e. how it compares with an I.Q. obtained from Binet tests of seeing subjects. We are now attempting to correct both deficiencies, in our 1941 adaptation.

The Standardization of the 1941 Adaptation

The statistical procedure thus far completed seems to show 1) that the 1930 adaptation was a fairly *valid* instrument, well worth working over and revising again. Comparing our Binet results with the results of other measurements of intelligence we find a satisfactorily high positive correlation,—above +.75 for the Otis Classification Test, and above +.80 for the Stanford Achievement Tests. The Kuhlmann-Anderson Group Intelligence Test gives somewhat lower correlations—not above +.60—but there is some question whether the mechanical difficulties involved in giving this test in braille have been satisfactorily met and whether the test is not quite as much a measure of reading ability as of intelligence. 2) The 1930 adaptation seems to have been fairly *reliable*. Comparisons based upon retests at various periods give correlations in the 80's and 90's for the test series as a whole, and equally high correlations for a large proportion of the individual test items.

And a special study of sixty-eight pupils tested five or more times gave a set of curves which indicate a very satisfactory constancy of the I.Q., the superior groups tending to show greater superiority from test to test, while the normal group remained at about the same level and the inferior groups tended to become more inferior. 3) The *reliability* of the individual test items appears to be high. Tetrachoric correlations of each item with the M.A. (Mental Age) obtained from the whole battery of tests discovered very few items of so little reliability that they will have to be eliminated; and tetrachoric inter-test correlations showed that only a few tests must be omitted because they duplicate each other.

How Intelligent Are the Blind? How Does a Hayes-Binet I.Q. Compare with a Terman-Binet I.Q.?

Great caution must be used in generalizing about the intelligence of the blind since this question has not been a major aim in our work. We needed tests to classify children coming to schools for the blind and the practical issue had to take precedence over the theoretical. We have now, however, a certain amount of indirect evidence which will be checked with direct evidence when material accumulates from the projected use of the L. and M. scales of the 1937 Terman-Merrill revision, selecting only those tests which can be used with the blind practically without change, and in the same year groups in which they are scored for the seeing. Other evidence will come from the use of the Brown I.J.R. Test (Institute of Juvenile Research) for the Visually Handicapped and the Wechsler-Bellevue Adult Intelligence Tests, both series having been standardized on the seeing.

In so far as the Binet tests measure functions similar to those involved in school work, one might reasonably expect somewhat lower I.Q.'s than with the seeing, since blindness accentuates various well-known causes for school retardation. We are accustomed to explain educational retardation by any one of a considerable number of accidental causes such as illness in infancy, physical accidents, malnutrition, lack of

sleep, unwise treatment in the home—whether characterized by over-indulgence or excessive restraint—emotional conflicts due to a sense of inferiority or an unhappy home life, belated admission to school, irregular attendance, inefficient teaching, etc. Whenever blindness increases such hazards—and people in work for the blind will say that this occurs very frequently—we may look for their effects in delayed development and backwardness in school work. As a matter of fact we do find an age-grade retardation averaging from two to three years in most residential schools for the blind, and extending to four years in some schools or grades.

Our indirect evidence points to a similar retardation in the development of intelligence. 1) In our achievement tests, which show a high correlation with our Binet tests, blind children test just about at the seeing grade levels when we give them the extra time needed for reading braille, i.e. the objective evidence of tests supports the subjective grade classification by the teachers. 2) A comparison of the I.Q.'s obtained when 300 pupils tested with the 1923 adaptation were scored in two ways, indicated a lower attainment for the blind. In this study two I.Q.'s were calculated for each individual, one I.Q. from the test items in the age groups in which they appear in the 1916 Stanford Binet, which we called the "seeing I.Q.," and another I.Q. calculated from the same test items but in the changed age groups in which they appear in the 1923 adaptation for the blind, which we called the "blind I.Q." The average "seeing I.Q." was .89, S.D. .1821; the average "blind I.Q." was .92, S.D. .1910. The two I.Q.'s showed a rank order correlation of $.84 \pm .011$.

3) Various tests of blind children's vocabularies point to a marked retardation. Terman's group vocabulary test was used with more than 400 blind children in our early testing and showed a definite, annually increasing retardation of one year for the eleven year olds, three years for the thirteen year olds and four years for the sixteen year olds. The individual vocabulary test of the Binet series showed a similar retardation. Terman, in his 1937 revision states that his vocabulary test

"agrees to a high degree with the mental age rating on the scale as a whole"; so we may conclude that the deficiency blind children show in vocabulary gives evidence of a lower level in intelligence. Similarly in the Word Meaning test which is number 2 of the Stanford Achievement series, the attainment of blind children runs about 10 per cent below seeing standards when the blind are grouped by mental age.

4) Blind children tend to test lower than the seeing in all the Binet items which one would classify under thinking or reasoning. In the comprehension tests and in the tests calling for differences and similarities we find an increasing retardation, one or two years in the lower age groups and four years in the teens. Samples of comprehension tests are: "What must you do when you are sleepy?" at four years; "What's the thing to do if it is raining when you are out playing?" at six years; "What's the thing for you to do when you have broken something which belongs to someone else?" at eight years; and "What ought you to say when someone asks your opinion about a person you don't know very well?" at twelve years. "What is the difference between an orange and a ball?" is asked of the seven year old; "In what way are iron and silver alike?" is a ten year test; "In what way are a snake, a cow and a sparrow alike?" is asked of the twelve year old. Blind children test just about at age when eight year olds are asked to make a sentence containing two words, such as "ball" and "play"; they fall two years behind when at ten years they are asked to make a sentence containing three words such as "work," "money," "men." Still more obvious thought questions are the following: the problematic situations presented to nine year olds, such as "A little boy is coming into his home crying, and holding a paper bag with a hole in it. What has happened?"; the absurdities tests of the twelve year group, such as "An engineer said that the more cars he had on his train, the faster he could go. What is foolish about that?"; the fourteen year tests—the interpretation of fables, the completion of analogies, "Ship is to water as train is to what?"—the problem questions, "A man who was walking in the woods

near a city stopped suddenly, very much frightened, and then ran to the nearest policeman, saying that he had just seen hanging from the limb of a tree a—a what?"—the items in arithmetical reasoning, the request to tell the time if the hands of the clock were reversed from their present positions, the demand for the three main differences between a president and a king; the sixteen year tests in which pupils are asked to give the general meaning of four phrases like "Drinking the sea dry" and "Touching the end of the rainbow," are required to tell how many boxes are involved in various combinations of boxes which contain each other, are tested for their ability to explain the meaning of proverbs such as "Every path has its puddle" and "Rome was not built in a day"; the eighteen year test in which pupils are asked to listen to a fairly abstract paragraph and give the main thoughts expressed. In all these tests involving reasoning fairly normal curves of progress from year to year have been obtained, but the level of these curves is from two years below the seeing in the earlier tests, and three or four years below in the fourteen year tests, to a still greater retardation in the highest years. In general, then, we must conclude that the Binet tests of reasoning, which have been used with more than 3000 blind children, indicate a retardation of about two years in children below ten years of age, of four years when they are fourteen, and a still greater retardation in the late teens. A similar conclusion may be drawn from the results of *group* tests of reasoning, which have been given to several hundred blind children. There would seem to be no doubt that blind children are retarded in reasoning as much as, or more than, they are retarded in school progress, possibly from the same causes.

How Intelligent Are the Blind?

We have no scientific evidence about the adult blind, except so far as those are involved who were tested during their course of study in a residential school. But the "constancy of the I.Q." would lead us to expect our graduates to remain in the same general group through life, superior, average or inferior.

We should say the same about people who lose their sight after school days: blindness becomes a very serious handicap in social intercourse and makes it much more difficult to keep up with events, for even those who learn to read braille have at best a slow and limited tool to work with. About blind school children we can speak with more authority on the basis of our extensive testing—both the direct and the indirect evidence seem to point to at least a two year retardation in school work and in the abilities our intelligence tests measure. With the improvement and extension of our tests more definite statements may be made. Our immediate program includes a 1941 Hayes-Binet adaptation standardized upon the blind in residential schools yielding a "blind I.Q." for classification purposes within the schools; the use of the five verbal tests and the vocabulary test of the Wechsler-Bellevue Adult Intelligence scale with children from sixteen years upward and with blind adults; some use of the Brown I.J.R. Tests for the Visually Handicapped which was standardized upon the seeing; and a selection of tests from the L. and M. forms of the Terman-Merrill Stanford revision of 1937 which may be used with the blind without change. We hope ultimately to construct comparison tables to translate the results of one test into those with each of the others, and then we can give more explicit answer to our question, How intelligent are the blind?

Suggested Readings

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Special Groups Among the Blind

Jessie W. Mayshark

AMONG the blind children who require definite adaptation of educational procedure to their particular abilities or disabilities are the superior blind, the crippled blind, and the mentally-retarded blind.

It can readily be seen why the last two groups need special consideration, but the very superiority of the gifted blind often obscures the fact that they require anything more than the regular school program offers. Ordinarily these superior pupils progress in a fairly satisfactory way regardless of pedagogical stepping stones. Because of the ease with which they master the regular requirements they usually acquire a complacent feeling toward school and a hopeful attitude toward life; for the most part they make at least tolerable social and emotional adjustments.

Accordingly, since he rarely presents either a behavior or an educational problem, the superior blind child is too often served no more enriching fare than the opportunity to figure as official mouthpiece and mental trail breaker for a class which, with himself possibly as the sole exception, may be comprised of quite mediocre pupils.

It is not enough that these superior blind children be just a little better than their fellow students. They must be prepared to meet the double responsibility which will be theirs when they go out into the world. It is for them to convince a sceptical public—albeit a sympathetic one—that achievement and success are dependent upon more fundamental endowments than physical vision. The second and greater responsibility of the superior blind is so to organize and expend their own powers that their not-so-fortunate fellows may see in them a shining example toward which they—the less

favored—may strive. Educators of the blind are—or should be—aware that failure to equip these superior pupils to take their rightful place in industry and society is an inestimable loss to the cause for which they are working.

At Perkins Institution last year a survey was made of gifted pupils—all having I.Q.'s of 120 or more. The survey gave careful evaluation to home environment, physical, mental, moral, social, and educational characteristics, emotional stability, and special abilities. The ratings of the pupils were made by teachers, housemothers, and members of the staff in daily contact with the pupils and therefore the most likely to know their outstanding characteristics. The survey was conducted with the intent of discovering the negative as well as the positive qualities and attitudes of these superior pupils, to the purpose of determining what changes or modifications in their school work might prove beneficial to their educational growth and social development.

One of the most illuminating results of the survey was the disclosure of the wide range of individual differences among these pupils who would, generally speaking, be grouped together as the "superior blind." We may deduce from the findings that the superior blind are highly individualistic and that it would be impossible to reduce theories regarding their training and education to any common denominator of application. When an instructor finds himself privileged to teach one of these gifted children the best he can do is to study the child, make his own survey, and chart his own course, giving heed to all available advice by experts in this particular field.

In the opinion of many long-experienced workers in this field the superior blind child should, whenever possible, attend public school. There are several reasons to bear out this point of view.

The gifted child in a school for the blind is rarely exposed to stimulation such as arises from competition among the brighter pupils in a public school. If not particularly ambitious, he is content to be rated as a little better than average and perhaps is not even aware of the reserve of mental energy

which he possesses. The before-mentioned survey disclosed that at Perkins Institution there were among the superior pupils several who, by reason of their I.Q.'s, might be expected to maintain a higher standard of social adjustment as well as of scholastic achievement. Doubtless the challenge of the public school would rouse some of these pupils to greater effort and thereby to greater accomplishment. It is also argued that, in his contact with seeing pupils, the blind child acquires self-confidence and poise which will be of tremendous benefit to him when he attempts to earn a living in the world of the seeing. And again, if he attends the public school in his own town the blind child becomes known there and makes acquaintances and friends in the community where presumably he will continue to live and seek employment. Also, by attending public school and keeping abreast of the other pupils there, the superior blind child performs a service for all who are blind by convincing the public that a person without physical vision may live happily and safely in the seeing world.

On the other hand there may be sound reasons why the superior pupil should attend a residential school for the blind rather than a public school. His home environment may be so wretched that it presents an obstacle not only to his physical and mental growth, but a menace to his moral stamina as well. In the public school system there is no service from medical and physiotherapy departments such as is available to pupils in schools for the blind—an attention which is often vital to the well-being of the blind child. In schools for the blind the teachers are specially trained in methods of teaching such handicapped children, and because of the small classes each child receives more individual attention than could be given him in public school. Schools for the blind are better equipped than public schools for teaching special skills and arts, such as shopwork, broom and brush making, chair caning, weaving, and music—which training will contribute to the pupil's economic success.

Schools for the blind often provide their pupils with channels for creative ability, self-expression, and executive train-

ing which would be denied them as pupils in public schools. One of our gifted pupils at Perkins is particularly interested in speech work, dramatics, and radio broadcasting. He hopes to follow one of these lines for his life work. How is this school helping him to make this dream possible? In the first place, it is doubtful if in any public high school in the country he could have received a course in speech training comparable to the one he has had here. Moreover, he has had unlimited opportunity to exercise his dramatic ability. In his junior year he played the part of Bassanio in *The Merchant of Venice*, and in his senior year he was Caesar in *Caesar and Cleopatra*: in these performances—both notable for their general excellence—his work was outstanding. In a radio broadcast devoted to the interests of Perkins Institution he acted as announcer with a sureness and confidence which would have done credit to a radio man with years of experience. When the war clouds began to grow dark over Europe this young man won from the director of Perkins permission to present a peace program at a morning assembly in the chapel. He collected and organized his material, and with the help of a fellow student, gave a program which will not soon be forgotten by those who heard it.

Although this young man's interest lies along dramatic lines, he has taken an active part in other extracurricular activities. He sings in the school chorus, he is an important member of the track team, he has acted as news editor and later as assistant editor for the school paper. For one year he went out nearly every Saturday from twelve until six or eight o'clock selling brooms from door to door. This last experience he thoroughly enjoyed; he says, "It gave me contact with all kinds of people."

One of the girls in our present senior class, an enthusiastic girl scout, was accorded the highest tribute for girls in that organization—the Eaglet Award; this girl was one of the last to be so honored, as the award has since been discontinued. This girl's executive ability has found vent in a variety of ways; she has served as president of the Howe Reading Club,

secretary of the Sport Club, alumnae editor of the school paper, treasurer of her own class, and a member of the student council.

A residential school for the blind located near higher institutions of learning offers a real service to its gifted students when it allows them to return after graduation to continue their education in near-by colleges, or universities. During the past five years, of the post-graduates living at Perkins Institution, one has been graduated from Harvard, two from Boston University, three from Boston University Law School, and six from New England Conservatory of Music.

Teachers and workers who are responsible for the education and training of superior blind children do well to ask themselves these two salient questions, First, are these gifted boys and girls using their mental endowments to the fullest capacity? Second, are they being accorded the proper guidance, training, and opportunity for self-expression and creative ability? Only when these two questions can be answered in the affirmative is it possible to maintain that our gifted pupils are being adequately prepared to take up the work and carry on the tradition of successful blind men and women of today.

The crippled blind child, by reason of his added infirmity, presents a serious educational problem. Assuredly such a child, especially if he possesses normal, or superior intelligence, is entitled to an education. But in the case of a child whose crippled condition confines him to the bed or one with extreme motor disability, if proper instruction cannot be provided in the child's own home, to what type of school shall he apply for admittance? Is his rightful place in a school for the blind or a school for crippled children?

It may be argued that blindness rather than any accompanying physical handicap should determine the character of the child's education and that, since the facilities for teaching the blind are centered there, the crippled blind child belongs in a school for the blind.

Without doubt the director of any school for the blind

would give deep consideration to the application of a doubly handicapped child, with the sincere desire of accepting the child if he could reconcile such a decision on the grounds of fairness to his school and advantage to the child. A few years ago a child with a serious motor disability was admitted to Perkins Institution and kept for a period of six years. During this time she required personal care and supervision far in excess of the other children, she needed constant treatment and corrective work from the medical and physiotherapy departments, and she was several times admitted to a general hospital for observation and treatment, at one time remaining there five months before returning to Perkins. However, when the child was finally dismissed, it was not because of the extra time and service which her case demanded from numerous members of the staff, but rather because it was generally conceded by the teachers and personnel workers that her progress in school was negligible and in no way justified the output of effort and energy, which being expended upon her was not available to other pupils.

Mention of this case is by way of showing that the fundamental need of many of these crippled children is hospital care. The hospital cannot be brought to the school, but instruction *could* be carried to a hospital school. This particular child was fairly independent. Although she wore a brace she was able to walk unaided and to go up and down stairs without assistance. Moreover, she had a slight degree of vision which aided her greatly in avoiding collisions with other children. A less able child—one on crutches, for instance—would be at a decided disadvantage in a school where blind children are encouraged to run about and play freely.

Institutions specially designed for crippled children are adapted by way of arrangement and equipment to the needs of those children. The buildings and furnishings are planned in every way to relieve the children as much as possible from unnecessary strain and effort and to safeguard them from injury. If these precautions are necessary for the welfare of

crippled children with sight, is not the need for such measures even greater in the case of crippled blind children?

Without attempting to argue which is the greater handicap it must be admitted that in the case of a crippled blind child it is usually the motor disability rather than the blindness which is the instrument of discomfort and suffering; it is the motor disability, also, which induces the liability to accident and injury. These factors can best be controlled in a school specially designed for crippled children.

On June 21, 1918 Miss Flora Mabel Parcher, a graduate of Perkins Institution and of New England Conservatory of Music, was engaged as teacher of music by the Massachusetts Hospital School at Canton. She carried on this work until the time of her death, January 16, 1931. From the Superintendent's Annual Report, 1931, comes this recognition of her services, "In the selection of a successor to Miss Parcher we heard on every hand, 'Where shall we find one who in such varied spheres can do so much and do it so well?' "

Had there been a blind child in this school for crippled children at that time, might its education not have gone on successfully under Miss Parcher's direction? Might not other graduates of schools for the blind with the characteristics which so endeared Miss Parcher to her fellow workers and students be engaged to teach crippled blind children either in hospitals or in private homes?

Certainly an intelligent blind child—eager to learn—presents a challenge which should be met by whatever institution or agency is best equipped to render the service.

It is a commonly accepted fact among public school people that mentally retarded pupils should be in a group by themselves. In regular grades they impede the progress of brighter pupils and are themselves compelled to suffer a barrage of discouragements, humiliations, and failures because of the handicaps under which they work. For these same reasons it is important to segregate the retarded blind from the normal and superior blind.

This group of retarded pupils is variously named in differ-

ent schools. At Perkins Institution it is known as the special class. By whatever name it may be called—special class, coaching class, opportunity class—it is comprised of those pupils who for some reason (possibly a temporary one) do not function normally or happily in regular classes. It is impossible to set any standards or fix any limitations for such a class. The pupils one year may range from those who are unable to grasp and retain the fact that two and two are four along up a scale of varying abilities and disabilities to those at the head of the class who may be capable of scoring a sixth or seventh grade rating in some of their achievement tests—not in all of them, of course, or they wouldn't be in the special class. And next year the set-up of the class may be entirely changed. The necessity of constantly shifting one's method of approach from a child who asks if Uncle Sam is living or dead and is hopelessly mystified by an attempted explanation of that symbolic term to other pupils who are eager for the latest international news hot off the wire, is enough to jolt any teacher out of the proverbial rut.

One thing which the special class most decidedly should *not* be is a dark threat held over the heads of unsatisfactory pupils as to the place where they are likely to go if they do not mend their ways.

Of these retarded pupils the borderline cases are the most challenging. They are the ones who are often allowed to trail along at the foot of a regular class. They usually begin their school life by making heroic attempts to keep up with the others. After repeated failures they become discouraged with the hopelessness of it all. They grow sulky and rebellious. Often they are known as serious discipline problems. This happens as the natural result of an unwise attempt to grind them ruthlessly through a mill which is obviously intended for a finer grist.

One of our girls at Perkins Institution was carried along until she reached the fifth grade. Each year she found it more and more difficult to keep up with the others. As her defeatist attitude increased she became sullen and openly defiant. When

she was transferred to the special class she found herself in a wholly new set-up. While she had always been at the foot of the class she was now elevated to the head of the new class. Her self-esteem rose accordingly, and thereafter would not permit her to indulge in those bursts of passion by which she had formerly drawn to herself the attention which she craved but had not been able to acquire by more praise-worthy means.

The self-confidence of these dull pupils and borderline cases should be built up in every legitimate way so it may serve as a bulwark against the waves of bitterness which are sure to assail them again and again as a result of school and life experiences.

The special class should provide ample opportunity for each child to progress in every way to the full extent of his ability and at his own tempo of learning. Because a child has been transferred to the special class, it should not be an accepted fact that he has come to the end of his academic achievement, but rather that he has arrived at a new starting point. In an environment where he is relieved from the strain of competition with pupils of greater scholastic ability he may show marked improvement. The special class should attempt to free each member of the group from any fear or tension which may be influencing his attitude toward school and school work; it should provide a calm, unruffled environment where each child may do his best work, unhampered by anxiety as to marks, tests, failures, or promotions.

Obviously it would be the ideal procedure to require of these retarded pupils only such learning as will actually function in their life experience, to train them only in the tasks which they will perform either as a means of earning a livelihood or for their own pleasure and satisfaction, to direct their attention only to those interests which are certain to retain significance for them as the years go by.

If we were omniscient beings it would be within our power to sift, blend, and mix the educational fodder and so provide the perfect mixture for each pupil. But being only mortals

progressing by the trial and error method we must continue each year to reconstruct our program, content to add, subtract, or substitute whenever our past failures convince us that such changes are necessary.

However, there are certain fundamental assumptions regarding the training of these retarded pupils which may serve as a foundation upon which to experiment. There are essentials of learning which may be accepted as sound objectives for the special class.

First, it is the right of every one of them to be taught—if possible—to read. One of our social workers tells a little incident which shows how this accomplishment is estimated by those who are unable to read. The social worker was driving the mother of one of our boys to the hospital and, not knowing the route very well, was making a point of reading the signs along the way. "My!" said the woman with a note of longing in her voice. "It must be wonderful to know how to read."

There may be some members of the special class who simply cannot learn to read, but it is a tremendous boost to their self-respect if they can acquire even first grade ability in the art. From this first stage which is a mere naming of words we would carry as many as possible of our pupils on to the point where they derive genuine pleasure from their reading. It is a joy for the teacher when one of these retarded children begins to get real satisfaction out of his reading. Not long ago one of our boys was reading silently while another class was going on in the room. The story was one of the *Fifty Famous Stories*—how King Alfred in disguise was left by the old woman to tend the cakes and how he let them burn. In his enthusiasm over the story the boy burst in upon the other class, exclaiming, "She's giving him heck for letting the cakes burn, and he's the king, and she don't know it." In our delight at seeing the boy so carried away by the story we are willing to forgive him the ungrammatical "don't" and even the inelegant phraseology "giving him heck."

We find that social studies—history, geography, citizen-

ship—have more significance for these backward children if they are presented in the light of what is happening in the world today, going back to resurrect characters and stories of the past only in so far as they are valuable in interpreting or enhancing present day events. We cannot abruptly introduce one of these children to Julius Caesar and have the acquaintance mean much to him. Neither will abstract talk of forums, togas, or centurions strike any spark in his imagination. But if he listens over the radio to the interpreted speech of some political leader in Rome today, if his interest can be aroused in what is going on there at the present time, then quite possibly Julius Caesar and his time may, by way of contrast, come to have real meaning for him. In social studies we must tune our speech to the wave length of the child's intelligence. If we do not speak in phrases that he understands the impression which he receives is hopelessly confused. One of our boys, hearing that the Greeks wrote upon tablets, cherished the idea for a long time that it was aspirin tablets upon which the Greeks kept their records.

The radio is an invaluable way of keeping abreast of the present and at the same time recalling the past in a vital way. Since these backward children will doubtless get much of their entertainment from the radio, it is well for us to try to direct their interest to worthwhile programs.

When the children in the special class have learned to tell time, make change, recognize days of the week and of the month, and understand a little of measurements, such as pints and quarts, inches and feet, they have acquired about all in the way of arithmetic they will ever need. However, if any of them, like one of our boys, expresses a deep curiosity to "find out the biggest number in the world" there can be no harm in encouraging him along this line of research.

Because of poor muscular co-ordination many of the retarded blind have considerable difficulty in learning to use their braille slates. However, unless his muscular disability is extremely serious, if a child can learn to read he can usually learn to write also, if enough persistence on his part (and the

teacher's) is brought to bear on the case. To be able to write an interesting letter should be the class goal in written composition; the children enjoy keeping diaries, also, and copying favorite poems into notebooks. It is an advantage to them if they can master some form of pencil writing so that, quite independently, they are able to write a letter which may be read by a person who is not familiar with braille. In oral language the emphasis should be placed upon simple, direct speech in ordinary conversation; also much drill is needed to overcome certain well-established errors in language usage and to implant the right forms in their place. The pupils need, also, plenty of opportunity to express themselves along the lines of their own interests. When a child in this group has developed the power to stand before the class and relate in a straightforward way some little story or personal experience so that it may be understood and enjoyed by the class, he has contributed immeasurably to his self-confidence and poise.

It is of tremendous importance that these children safeguard their health, not only for the sake of their own comfort and happiness but also to lessen the possibility of their becoming a burden upon the family, or the community. There are several very attractive series of health books on the market at present. One which we are now using imparts its information by means of broadcasts, supposedly given by the pupils in a certain school. It makes interesting reading; the children signify their approval of the broadcasts by expressions of satisfaction when the health program begins.

While only a few of these backward children may have real talent for music, many of them possess some musical ability, and most of them thoroughly enjoy listening to music. Every special class should have an orchestra, and each member of the class should play upon some instrument if it be only a modest bell which he rings at not-too-frequent intervals. The orchestra is relaxing. It provides an outlet for nervous tension which might otherwise be expended in less desirable ways. It offers the thrill of success to some members of

the class who recognize themselves as failures in all other school activities. There seems to be no correlation between academic standing and ability to keep time on the bass drum. The boy who has most difficulty in learning his number combinations may be the recognized leader of the harmonica section in the orchestra. As a result of our attempt to include every one in the orchestra there are, of course, many false notes. But each one does his best, and we imagine that we see some improvement. Meanwhile the orchestra plays on with its programs of folk songs and hits from the latest musical comedies—and is happy.

In handwork, as in other aptitudes, we find a wide range of ability in the retarded group. Some of our pupils are expert knitters; others may be clever at weaving or some similar crafts. Some, because of poor muscular co-ordination, find it difficult to manage the simplest manipulation without constant supervision. But even with the very helpless ones there are usually simple types of handwork which they can master, and so feel that they are making a real contribution to some school project. One boy in our class who, because of repeated failure in his attempts at handwork, had conceived an all-too-humble opinion of himself was elated to find himself doing a really creditable job of tearing newspapers to make paper pulp. "*Even I* can tear paper," he said with a degree of pride. Two ideas should motivate the selection of handwork for this class—first, to choose for each one those crafts which he can do with the least amount of supervision; second, to concentrate on the types of handwork which the pupils will continue to work at and enjoy doing when they go home.

Some of these children, although they may appear to enjoy reading under the teacher's supervision, will not continue to read when they leave school; sometimes because they have not sufficient urge to go on by themselves, sometimes because no person with sight can be enlisted to send for and return the books. But if we develop in our pupils a love of nature, we provide them with a book which will constantly be at hand, a book whose pages will never be worn, a book which will

always be a source of enjoyment with a continuous supply of surprises and new information. Forms and phases of nature are stories which may be read through the senses of hearing, touch, taste, and smell. The boy who comes rushing breathlessly in from the playground some February morning to announce joyfully to the class, "Good news, I heard a song sparrow this morning!" has unlocked the door to a treasure house of happiness which will be open to him for all the springs to come.

By means of a varied program we seek to advance each pupil along the line of his own particular ability. Often this advancement is slow—so slow that it may seem to us some of our pupils are making no progress at all. *We must be patient!* We must not be in too great a hurry to see the results of our efforts with these backward children. I quote from a paper written by Mrs. Jessie Royer Greaves, whose excellent work with these doubly handicapped children is well known among the educators of the blind; "I would beg for time—time—time in the development of the backward child. If his preschool environment has been negative, or worse, he is just that many years behind the child who has had good training from infancy."

Finally, as with the normal and superior children, we must teach *individuals* rather than *the class*. We must strive to bring to each one, so far as possible, the type of training which will make him self-respecting, agreeable to his companions, and acceptable to society.

Suggested Readings

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The Education of the Deaf-Blind

Gabriel Farrell, D.D.

A CENTURY ago eminent scientists in England and teachers of the deaf in America decreed with all finality that nothing could be done for children who were blind, deaf, and, consequently, mute. Such children seemed destined to live in darkness and in silence. But now a more hopeful story can be told, for within the last few years methods of instruction have been so perfected that triply handicapped children can be taught to speak and to understand the speech of others without the use of mechanical appliances or resort to manual signs. With the normal channels of communication thus opened, regular school work can be pursued and education, considered impossible a century ago, is now the right of all children who are deaf, blind and mute.

The opening of the doors for the triply handicapped began slightly over one hundred years ago. For it was on October 4, 1837, that Laura Bridgman, the first deaf, blind, mute ever to be educated, entered Perkins Institution for the Blind in Boston. Her release from the dark silence, which has been hailed as "one of the wonders of the world," was the outstanding achievement in the notable career of Samuel Gridley Howe, the first director of Perkins Institution and one of the great educators of America. Laura was seven years old when she left her home near Hanover, New Hampshire, having lost her sight and hearing and most of the sense of smell as a consequence of scarlet fever contracted when she was two years old.

Perhaps it was because leaders of that day were so certain that nothing could be done for such a child, or perhaps it was due to the fact that there was "no wreck of humanity so

shattered or so crippled" but that Dr. Howe found interest in it, that this valiant soul threw all of his ingenuity, patience and persistence into the task of reaching the imprisoned mind of Laura Bridgman. Howe had just established Perkins Institution, the first school for the blind in America, and later he was to found the first school for idiots. Before this he had shared with Lord Byron in the Greek fight for freedom. Later he was to marry Julia Ward, and a hundred years after, he is all but forgotten while his wife's name is imperishably preserved through her song "The Battle Hymn of the Republic." Despite all this, the soul of Samuel Gridley Howe is still marching on in the lives of handicapped children who owe to him their freedom and opportunity.

Since no deaf-blind person had heretofore been taught, Dr. Howe was faced with the momentous problem of deciding how to begin and what medium to employ. "One of two ways was to be adopted," wrote Dr. Howe, "the first and easiest was to go on and build up a system of signs. . . . Such a language could be taught easily . . . but it would have been rude and imperfect. . . . When it came to be applied to abstract matters and moral questions it would have been utterly at fault. . . . The other plan was to teach her a system of purely arbitrary signs, by combinations of which she could give the names of anything and everything, that is, the letters of the alphabet. For this she would only have to learn twenty-six signs, but having learned them, she could express countless modifications of thought by combining them in countless ways."

This theory was sound and simple. But how convey the idea of letters and the combination of letters to a deaf, blind child? Here is where the imagination of Dr. Howe had full play. He had already devised an embossed line type for the blind to read with their fingers, and taking common objects of daily use, a key and a spoon, and later a knife and a book, he attached to these objects labels bearing their names in raised letters. The child was made to feel these objects and the words designating them until she associated name with object. The

next step was to detach the labels from the objects and the pupil, given an object, was taught to find the right name for it. The third step was to cut the letters of the word apart and ask the child to pick out the letters which formed the name of the object given her. A long, slow, tedious process, but it worked; and, pressing on step by step, Laura Bridgman learned to use words as a normal person, and to employ language to express thoughts and ideas. From a hopeless, handicapped child she grew to be one of the most widely known women in the world. Laura learned to write with a pencil and her daily journal is one of the chief measures of her progress, but she never learned to talk, even though Dr. Howe believed it possible if he had had time to teach her.

Many visitors came to Perkins from all parts of the world to see this phenomenal child, but perhaps the most notable was Charles Dickens, who visited the school with Charles Sumner in January 1842. So interested was Dickens, that as a teacher recorded, he "did not deign to notice anything or anybody except Laura." In his *American Notes*, Dickens devoted fourteen of the thirty pages given to Boston to a description of Perkins Institution and the education of Laura Bridgman. After quoting long accounts of Laura's progress, Dickens wrote, "The name of her great benefactor and friend . . . is Dr. Howe. There are not many persons, I hope and believe, who, after reading these passages, can ever hear that name with indifference."

Some forty years later the reading of this account of the education of Laura Bridgman in the *American Notes*, by Charles Dickens, by a woman in Alabama formed the first link of a chain which reaches into the present day. New hope flooded the heart of the reader, for she had a child also deprived of sight and hearing. This child was Helen Keller, then six years old. Contact was soon made through Alexander Graham Bell with Michael Anagnos, the second director of Perkins Institution and it was arranged that a teacher, trained in the methods of Dr. Howe, should be sent to the Alabama home.

On March 3, 1887 this teacher, Anne Sullivan, a graduate

of Perkins Institution of the previous June, met Helen Keller for the first time. The story of the remarkable interwoven lives of these two women is too well known to need repeating. When Anne Sullivan, later Mrs. Macy, went to Tuscumbia, Alabama, she took with her a doll, the gift of the girls of Perkins, and dressed by Laura Bridgman who was still living at the school. This doll became the subject of Helen's first lesson when the new teacher spelled the letters "d-o-l-l" into her hand in the manual alphabet. It was while holding her hand under water, however, that the concept of word meaning penetrated the mind and "w-a-t-e-r" was the first word that Helen Keller voluntarily spelled. Response to the underlying idea that finger positions represented the names of objects was evident in three weeks, and from there on Helen's onward march to heights of genius and greatness has been unimpeded. In October 1889, Helen Keller came to Perkins Institution, remaining there until September 1893, when she entered the Cambridge School for Girls and later Radcliffe College from which she was graduated in 1904.

Dr. Howe's achievement with Laura Bridgman and the broadcasting of his success through Dickens and others forced the claims of the deaf-blind to a new recognition. Evidences of interest and attainment at this time emerged in several countries. The largest number of cases of deaf-blind was found in the rural population of Sweden. Here a benevolent lady, Madam Elisabeth Anrep-Nordin, took a profound interest in their welfare. After calling the attention of the Royal Family to these hapless human beings she secured legislative provision for their care. Coming to America, she visited several cities and spent a number of weeks at Perkins Institution. On her return to her home in Skara, Sweden, where her husband was the principal of an institution for deaf-mutes, Madam Anrep-Nordin, beginning with five pupils, established a school for the deaf-blind in 1886.

At approximately the same time another milestone was being set in Norway. In 1888 Ragnhild Kaata, born in 1873 and deprived of sight and hearing in 1876, was admitted to the

Oral School for the Deaf, in Hamar. The Headmaster, Elias Hansen Hofgaard, began at once to teach her orally, using methods employed by the seeing deaf. Showing phenomenal aptitude for lip-reading through her fingers, Ragnhild is conceded to have been the first deaf-blind person to have learned to talk. Such instruction had already been attempted in the case of a lad in Switzerland, Jaques Edouard Meystre, but the effort had not proved successful.

When, in 1890, Helen Keller heard of this deaf-blind girl in Norway who had learned to talk, she resolved to emulate her. Lessons in articulation were given by Miss Sarah Fuller of the Horace Mann School for the Deaf, in Boston, and continued for four years at the Wright-Humason School for the Deaf, in New York.

In telling of these pioneer efforts in articulation record should be made of the studies of Dr. Francis Lieber, a nineteenth century student of speech and an authority on the psychological side of the education of the deaf-blind. His paper "On the Vocal Sounds of Laura Bridgeman . . . Compared with the Elements of Phonetic Language" is included in *Smithsonian Contributions to Knowledge*, Volume II (1851). In an earlier paper he wrote: "All (deaf-blind) have shown the internal necessity of language which promptly manifested itself so soon as ingenuity and wisdom had contrived the means of breaking through the thick walls which kept their souls immured and of establishing a bridge of communication with the outer world."

Michael Anagnos, who trained Anne Sullivan and sent her to the home of Helen Keller in 1887, wrote in his report for the following year: "After the glorious discovery of Christopher Columbus the Atlantic Ocean became a common thoroughfare." He then went on to list the several deaf-blind seeking and finding training in various institutions for the deaf and blind in this country and abroad. From that time on there have been many doubly-handicapped persons with whom efforts were made to establish "a bridge of communication with the outer world." Different methods and schools of

thought have arisen and Corinne Rocheleau and Rebecca Mack, in their great contribution to literature on the deaf-blind, *Those in the Dark Silence*, list eleven methods for conversation and thirteen for reading and writing, which have been tried but are now obsolete. These ladies in their book have compiled a most comprehensive list of deaf-blind persons.

At Perkins we feel that the oral method leads to the most effective communication and all of our instruction is based on a system of the oral method, first devised by Miss Sophia Alcorn. The New York Institute for the Education of the Blind, which opened a new building especially designed for the deaf-blind in April, 1938, offers instruction through the manual method as well as the oral method. This choice of methods will be found in several other schools which are endeavoring to give instruction to the doubly-handicapped.

To illustrate the modern methods of reaching beyond the barriers of deafness and blindness and to contrast them with the earlier procedure, previously described, we will tell of some of the pupils now at Perkins. In 1931, a special department for the deaf-blind was formed with teachers especially trained in speech-building and in the use of vibration for hearing. At the present time (1940) there are eighteen deaf-blind pupils in residence, the largest number of such children ever assembled for education. Upon visiting this department one finds a happy group of children, revelling in the release from the dark silence which modern methods have made possible, and sees what has been called "the world's greatest experiment in human salvage."

With the pupils now under instruction, spelling in the hand is not allowed and no manual signs are permitted. The aim is to make communication as normal and natural as possible so that anyone, not only those who know the manual alphabet, can talk with the children. Not many years ago this was thought to be impossible, but now its practicality has been proved and it can be demonstrated by several accomplished children. The secret of success is vibration. Vibration has become sight and sound for the deaf-blind.

The opening wedge with the children now is not an object, as in the past, but a command. Most often "Bow" is the first command. The beginning pupil places his fingers on the teacher's face, feeling both the vibration of the muscles of articulation and the position of the elements of speech. The teacher will say "Bow" distinctly, while she pushes the child's body into a bowing position. This is done again and again until the muscular action of bowing is associated with the vibrations felt when the command is spoken. Sometimes it takes months of daily work to get this idea into the child's mind. After the first command is understood, others, which become progressively difficult, are taught.

Teaching to speak is even more difficult. At first, the child has to be shown how to form his lips and hold his tongue to make the fundamental sounds. Beginning with "oo" "ar," and in some instances "ee," the child has to learn to give these sounds in a natural voice. It must be remembered that deaf-blind children are not "dumb" because they are not able to speak, but because never having heard people talk they are not able to imitate. It is through imitation that the power of speech comes to the normal child. The deaf-blind child must be trained to hear through vibration and to build word meaning into the delicately varying vibrations. Then he must be taught to reproduce with his vocal cords the sounds thus heard.

To illustrate the progress possible, consider Leonard Dowdy. Leonard, who came to Perkins in 1932, from Missouri, lost his sight and hearing from spinal meningitis at the age of twenty-one months and had not learned to talk. When he came to Perkins he was like a little animal, running about on all fours. He displayed unique intelligence, however, by running backwards when he was in a hurry, having learned from experience that it hurt less to bump his rear end than his head. In his first year at Perkins, Leonard learned to speak and to understand only forty words. In two years he knew four hundred words. Now he talks all the time, holds conversations, expresses ideas and is doing the full work of the fourth grade in school.

Leonard is a regular boy. Full of fun, he loves to be with other boys. This is giving his teachers concern because he is adding words to his vocabulary which he wouldn't learn in school. He has an acute sense of smell which helps him in recognizing people. He has an uncanny way of knowing a man from a woman as soon as a visitor enters the room. He made a mistake once when a woman who had been smoking came to see him. On her arrival he exclaimed, "A man!" Since then his knowledge has broadened. Flowers in a room, however, confuse him. Leonard also has an accurate sense of direction and after going to a place once he can usually find his way there again. Last summer, while visiting, he was taken to a neighbor's home to play with a little girl. The next day he stole away, found the house and called, "A little girl, please come and play with me."

This boy has become so proficient in detecting vibration that he can understand his teacher by placing his hands on top of her head when she is speaking. Another pupil, Helen Siefert, who came to Perkins from Nebraska, can receive vibrations through the soles of her feet. This was discovered by accident when her teacher was romping with her one night at bed-time. Helen started to creep away and the teacher seized her foot to pull her back, instinctively calling "Come back here!" As she did so the foot came close to her mouth, and to her astonishment the child replied, "No, I won't." Experimenting further, it was found that this child could understand words spoken with the foot held in front of her teacher's mouth. These facts make us believe that we are only on the edge of the possibilities of vibration in conveying sounds to handicapped children.

To extend the use of vibration, a hardwood floor laid on strips of rubber has been placed in the large room of the Deaf-Blind Department at Perkins. Our floors are concrete, which carry no vibration, but with this super-floor the deaf-blind children can locate one another and take part in rhythmic games. To locate one another they have a system of taps. This vibrating floor delights little Carmela Otero from New

Jersey, who is eleven. A quiet little girl, full of music, Carmela loves to do rhythmic dances led by the teacher's taps upon the floor. Another boy, Ralph Gantz of Colorado Springs, who has been with us two years adores Cal's Colt, and rides it whenever opportunity presents itself. Leonard is amused at Ralph's pleasure in this. The other day someone asked Leonard about Ralph. He said, "Ralph is riding his horse," and when asked how he knew he answered, "He goes bump, bump, bump!"

There is not space to tell of all our "children of the silent night," as we describe our deaf-blind pupils, but we must mention the twins Margaret and James Allen from Ohio, who were admitted in January, 1937. They are lovely children whose sight is marred by cataracts and whose total deafness is congenital. In 1938 Dovie Mae Yocom came to Perkins from Texas. Then seventeen years old, Dovie did not lose her sight and hearing until she was eleven and already had learned to talk. When the dark silence closed about her, Dovie devised a way of her own to keep in contact with the outside world. She talks by the question method, thus: "If today is Sunday, hit me." When you pat her in answer she is content. Dovie Mae is now fully adjusted to school life and recently made up her mind to learn to spell the names of all of the states.

To show that training leads to accomplishment, mention should be made of Winthrop Chapman, who lives in South Dakota. "Tad," as he is called, was at Perkins eight years, and in June 1938, completed the requirements for graduation from high school and was awarded a diploma, the second ever to be given to a deaf-blind pupil. For a time it was thought that he would go to college, but this seemed inadvisable partly for financial reasons and partly because it was doubtful whether a college degree for this boy would be worth the mental energy and strength which earning it would require. After graduation "Tad," with his mother and Miss Inis Hall, his teacher, went to South Africa where his talks and demonstrations did much to stimulate interest in both deaf and blind in that land. Now he is writing the story of that trip.

While Perkins can claim a certain historic origin in the successful work with the deaf-blind and over a century of continuous service, there are other places where the doubly-handicapped have found refuge and guidance. The Pennsylvania Institution for the Instruction of the Blind has had several deaf-blind pupils and, more recently, Joseph Iannace, who was transferred to the New York Institute. The Nebraska School for the Blind has had a notable work with nine deaf-blind children of outstanding ability, including Clarence Goddard, whose autobiography was published in 1926, and who attended Perkins for four years. A more recent pupil there is Helen Siefert, who came to Perkins in 1934, and after two years' intensive work in speech-building, with a teacher who came with her returned to the Nebraska school. After two years there she was sent to the New York Institute, where she is now a pupil. In addition to the two pupils mentioned as being at the New York Institute, there are in its new department eight other deaf-blind children. Deaf-blind pupils have been received and instructed in several other schools for the blind and for the deaf, notably in Virginia, Indiana, Minnesota, Michigan and Arizona.

An adequate account of the deaf-blind must include reference to the charming influence of Mlle. Yvonne Pitrois, of France, who in 1912 issued a paper in French braille for the benefit of the deaf-blind in her country. This little paper became a magazine, the first in the world devoted to the deaf-blind. In 1937, her pen, which brought so much cheer to her *petites soeurs affligées* was stilled by the closing of her useful and friendly life. A pen still active is that of Alice Bettridge, a deaf-blind writer of leading articles for the braille Australian magazine, and, also, that of Miss Frieda Le Pla, of England, a deaf-blind writer who tells vividly of the peculiar difficulties which a deaf-blind person has to face. Mention should also be made of the School for the Deaf, Dumb, and Blind, opened at Nowawas, Germany, in 1906, by Pastor Hoppe after visiting the school in Sweden; and of the new Holiday House, opened for the adult deaf-blind in Harrowgate, Eng-

land, in July, 1939. England is especially alert to the plight of the deaf-blind, although most of its work is among the adults.

In this country there are projects and persons in the deaf-blind area deserving of mention. Many regretted the untimely death of Stephen D. Cartright, at thirty-nine years of age, in February, 1938. Seriously wounded in the Siberian Campaign of the World War, he lost sight and hearing suddenly in 1925 in California. Living in Lincoln, Nebraska, he became widely known as a radio news commentator. Even more widely known is Helen May Martin, of Kansas, a deaf-blind pianist featured by Ripley-Believe-It-Or-Not. Receiving wide publicity recently has been Joan Higgins, six-year-old pupil of Dr. Robert H. Gault, Director of the American Institute for the Deaf-Blind in Evanston, Illinois, who developed the phonotactor, an appliance which transmits vibrations of the speaker's voice to the palm of the hearer's hand.

When it is realized that there may be close to two thousand deaf-blind in the country, nearly two hundred of whom are children requiring education, the importance of adequate provision for their release from the dark silence needs little pleading. With the new methods devised and the possibility of release proved, it would seem appropriate, as the second century of work in this field progresses, that facilities be made available for a group that has been called "the most neglected and the most handicapped in the world."

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Aids and Appliances in Education and Recreation

Richard S. French, Ph.D., and David H. Morgan, Ph.D.

A Comparison with Visualization

WITHIN recent years in general education there has come an increasing emphasis upon the use of visual aids. It is now quite generally recognized that mere reproduction of material given out is not an index of true learning. In order that the child may comprehend the various concepts which are taught in school, it is necessary for him to have a background of those experiences which make the concept meaningful. The blind child, even more than the sighted one, needs such "visual" aids if he is to comprehend many of the concepts which he should be taught in school. The inexperienced teacher is frequently surprised at certain misconceptions which he possesses regarding phenomena universally comprehended by the child of normal sight. Sometimes these misconceptions may be traced directly to faulty, or incomplete, teaching.

One striking case of incomplete teaching was recently brought to the attention of the writers. A teacher in plane geometry used the bent arm to illustrate an angle, the elbow serving as the vertex of the angle. The members of the class seemingly understood the explanation and could repeat, using the same illustration of course, the concept of an angle as it had been given to them. However in a later discussion with one of the boys, it was revealed that, in his mental picture, all angles had hands on one arm! A few minutes of demonstration of various types of angles with numerous and *different* examples soon corrected the misconcept.

The above example clearly shows what every successful teacher of blind children knows; namely, that one illustration,

or one type of illustration, is not sufficient in any case for the development of a true concept of the actual situation. If the child has partial sight, the problem of illustrating new phenomena is not so great since he has had such experiences as can be used as a foundation for the new or expanded concept. Likewise, *if the child has had sight*, the formulation of new ideas and of new relationships is easier. The child totally blind from birth is necessarily limited to those concepts which can be formed from the stimuli received by the unimpaired senses. The ingenuity of the teacher is constantly taxed to present materials in such a manner that the novel elements can be interpreted in the light of past experiences or illustrated by models.

The following sections of this chapter are designed for the purpose of showing certain materials which have been used as "visual" aids in the education and recreation of visually handicapped children in the California School for the Blind. Naturally, space does not permit an elaboration upon all the devices used. Some devices, because of uniqueness in design or of value in teaching will receive more emphasis than others. It is hoped that stimulation will be given to the development of further techniques and that some existing central agency may bring about a wide dissemination of knowledge regarding the use of such techniques after they have been tried in actual classroom situations. It must be admitted, however, that the value of mechanical aids depends largely upon the enthusiasm of the teacher and upon his ability to use them as effective teaching media.

Mathematics

Arithmetic.—In the teaching of mathematics, concrete material for observation and mechanical aids have been found to facilitate greatly an understanding of certain concepts and questions. Peg boards, type frames, and blocks are useful in teaching arithmetic in the primary grades. One of these arithmetic slates, the Cedrule, is said to be useful in teaching mul-

tiplication, division, squares and cubes, decimals, reciprocals, areas and diameters of circles, discounts, and proportion.

In the intermediate grades and junior high schools, mensuration becomes increasingly important. Actual problems should be given involving measurements of familiar objects. With slight adaptation, rulers can be made for use by blind children. Inches, marked in braille numerals by small round-headed tacks, can be represented by long cuts in the ruler, half inches by shorter cuts, etc. The length of various parts of the body can be measured and used for rough approximations of various distances. Models of familiar geometrical objects should be purchased, or, preferably, constructed in the shop by the boys. The mechanical devices for illustrative purposes should be constantly changing and increasing as new problems of presentation arise in class discussions.

Algebra.—In the teaching of algebra the main mechanical aid needed is one for graphing. One teacher of the blind has described a rather simple and practical way of overcoming obvious difficulties that are encountered by the blind pupil. The materials necessary are only the following: raised coordinate paper, board, strong pins, rubber bands or strings, and a straight edge. Any equation ordinarily encountered in secondary education may be plotted in the usual manner with these materials.

Geometry.—Probably more than any other subject, geometry should be taught through the use of many different types of models. It should be made objective, rather than abstract. By the time the pupil has reached the tenth grade, he should be familiar with most types of triangles and quadrilaterals through his previous training in mathematics. Various models, identified by names in braille, should be accessible to him. In addition to rigid models, other excellent teaching devices may be made by fastening together strips of maplewood with bolts and winged nuts. If holes are drilled into these strips at regular intervals, the pupil can practice the construction of many different types of polygons.

Although in the text the figures for the various propositions

in geometry are raised so that they can be discerned by touch, the pupils need additional manipulative material to illustrate them. Concrete models may be cut from light wood or they may be outlined by grooves cut into square boards. A combination of the two types seems desirable since the pupil may gain certain misconceptions from the exclusive use of only one type of "visual" aids. Problems dealing with congruency are better illustrated by two figures, one of which may be superimposed on the other. However, in problems dealing with construction, grooved figures in a flat surface may be readily followed. A wooden compass, considerably larger than the regular compass, should be provided so that the pupil may follow the construction step by step. The pupil is thereby trained for the next step, the construction of the figures.

The actual construction in geometry may be made by a modified ordinary compass or by a specially constructed one. Lines are represented by impressions in manila paper ordinarily used for the writing of braille. These lines may be readily followed as depressions while the figure is being constructed and as raised lines when the paper is reversed. A "drawing stylus" may be made by using a small boss or rounded point on a piece of galvanized iron, or similar metal, approximately one-sixteenth of an inch thick. The drawing board may be made of soft material such as upson board or celotex so as to permit impression in the superimposed paper. However, if the material, from which the drawing board is made, is too soft, the board soon becomes permanently marked and the construction may be ruined by rough surfaces. During the construction points may be represented by specially constructed thumb tacks with braille letters as heads.

A protractor for use by a blind person is almost as simply constructed as the ruler. It may be made from wood with grooves cut at intervals of five degrees. Degrees which are multiples of fifteen may be designated by grooves longer than those of the other segments of the circle and may be marked in braille by round-headed tacks.

For solid geometry the many models regularly used in

schools are applicable for instructional purposes in schools for visually handicapped children.

Geography

Maps, of course, are as important to blind children as to those of normal sight. Many adaptations have been made to aid the child in visualizing the relation of one section of the world to the other. Continents and islands may be "seen" on a simple globe map which has had emery dust or sand sprinkled over freshly shellacked land areas. Exciting trips may be made around the world with stops at interesting places. Ordinary relief maps are fairly intelligible to the blind child. Through differences in the contours and shapes of the land, the pupil may become quite accurate in locating countries on maps with which he has become familiar. There is no justification for believing that the blind child comprehends less of the actual situations than does the sighted one. Too great exaggeration of contours is undesirable and gives a very false impression. Jig-saw maps are particularly interesting to young pupils. They learn the shapes, positions, and relative sizes by trying to fit the pieces together.

After the various models have been studied, the construction of a relief map of a small area studied has been found to constitute an interesting, and educational, project for the pupils. Plasticine has been found particularly valuable for such work.

Political maps of the various countries with important points keyed in braille may be found in braille texts. The recent issues of current maps in braille by the Federal Works Progress Administration have served to keep pupils informed regarding the ever changing boundaries of Europe and to stimulate them in following current news as reported over the radio.

However, the study of geography in a modern educational system cannot be limited to mere memorization of political boundaries, or considered as an isolated subject, complete in itself. Materials from other classes should be introduced to correlate the different phases of the educational program.

Such factors as language, religion, political system, mode of living, and social customs of the peoples are all vital to a true understanding of the world in which we live.

Many models may be constructed from wood, plasticine, or any number of other materials, depending upon the ingenuity of the teacher to illustrate these factors. Obviously it is impossible to mention here all of the projects which may be undertaken in the geography class or to describe ways in which this work may be correlated with other work in the school. Excursions, however, must be named among the most essential means for acquiring ideas of natural features and of the reduction in scale used in all representative materials such as maps. The excursion as a teaching means in geography forms a natural bridge in the transition to our next topic.

Natural Science

"Visual" aids in the instruction of blind children in the sciences are as numerous as the facilities of the town or city in which the school is located. Excursions, which remove the instruction from the realm of the theoretical to that of the objective and which provide an added impetus to study, may be made to the business concerns pertinent to the topic under consideration. Before such excursions can be undertaken for the first time, it is necessary in many cases to overcome a certain reluctance on the part of the manager "to waste time" on children who, he suspects, will not profit by the experience. In the experience of the writers, however, no difficulties were encountered in arranging a visit for a new group the next year. In fact some managers have confided that the group from the school for the blind actually seemed to "see" more than other groups visiting the plant.

What could a visually handicapped child "see," for example, in an observatory? Very few people would recommend such an excursion. Yet one class of partially and totally blind children did visit an observatory, and the trip was a success. All of the partially blind students could see the full moon, and the totally blind seemed to participate in their enthusiasm.

A few of the group could see Saturn, and their description made it more real to the others. An examination of the various instruments produced a deeper respect for, and understanding of, astronomy. The police department with its modern devices for the detection of criminals, especially the "lie detector," the ice and cold storage plant, the canning factory, the telephone company, the press, the milk company, the weather bureau, and many others, all may be made a part of class instruction.

Many visual aids in science are no further than just beyond the outside door. Why sit in the class room and discuss erosion when objective evidence is available on the nearby hillside? Rocks, plants, trees, bird nests, hillslopes, canyons, and other natural objects are not far away, awaiting study. Collections for future classes may be assembled by the children from their own localities and brought back after the summer vacation. Other illustrative materials, such as cogs, levers, locks, motors, radio parts, may be easily collected over a period of years. These collections should not deteriorate into an assemblage of junk; they have been assembled for a purpose, to illustrate part of a story, and, unless they do contribute to the understanding of life, they do not justify the space which they occupy.

Although certain devices will be described under headings relative to subject-matter fields, their values are not confined by such narrow borders. Many aids and appliances here grouped under different sub-heads may be used in the same unit or project, and the same device may be of value in the teaching of several different subjects.

Chemistry and Physics.—In conformity with the experimental evidence on the subject, chemistry and physics are probably best taught by pupil-teacher demonstration of the various laboratory exercises. Ordinary apparatus may be used. The class should examine the apparatus before the exercise is begun and, if possible, after it is completed. A description of the reaction by a partially-sighted pupil adds to the interest of the class. Pupil participation should be encouraged as much

as it is feasible, and whenever possible, observations should be made by senses other than sight.

Animal Biology.—Models of the human body with the organs as separate units may be purchased. The pupil soon learns the location of the various organs after he has operated upon the model several times. An actual skeleton of the human body increases the interest in studying the skeletal structure of the body. It is still better to have fresh, or preserved, animal parts or specimens for examination by each child and, best of all, living specimens for study and class projects. The raising and feeding and general care of rabbits and poultry will teach more real biology than years of book study. An aviary is especially commendable.

Botany.—Models of various types of plants, including leaves and flowers, help to make the study of botany more meaningful. The inside structure of the leaf, although not comprehensible by touch, may be adequately illustrated by a model of the greatly magnified cross-section of a leaf. For distinguishing the many different varieties of plant growth in the neighborhood, outlines may be made on heavy paper with a tracing wheel and labeled in braille. Here again excursions are an indispensable part of the program.

Astronomy.—Except for the experiences gained through the use of the telescope and of pictures taken, blind children are no more handicapped than the seeing ones in visualizing the universe since it is possible to have models made of the solar system, for instance, with a degree of approximation to relative positions. Such models can be used to advantage if the child understands that the scale only approaches approximation. One very useful model of this sort was made by cutting a wide groove in the top of a low cabinet to represent the orbit of the earth. A small globe, mounted at the correct angle of inclination on a rod in a substantial base, represented the earth. Two pegs of different sizes were fastened in this base. Holes were drilled in the cabinet top at various positions around the orbit so that the earth could be placed only in its correct relation to the sun at that particular spot in its orbit.

The sun's rays were represented by long, thin wooden sticks, projecting from a rotative frame. The earth revolved around its axis so that night and day were clearly illustrated. The seasons were explained by showing the angle at which the sun's rays hit certain parts of the earth as the earth moved in its orbit. Differences in time could also be illustrated by this and other models.

Certain facts regarding the relation of the earth, moon, and sun to each other were demonstrated by another similar model of the earth from the base of which a perpendicular rod extended. A second rod, perpendicular to the above one, served as the axis for the moon, a globe bearing the same ratio to the one representing the earth as the moon does to the earth. The model of the earth and moon could be rotated around the one of the sun. Eclipses of the sun and of the moon could thereby be illustrated. A rough movable hemispherical cap, covered with aluminum paint, was fastened to the moon. This surface, always toward the sun, represented the bright surface of the moon. Thus the phases of the moon could be "seen."

Music

Naturally very few models are necessary for instruction in music. However, there is one worthy of note which is manufactured by the American Printing House for the Blind. As stated in a pamphlet issued by that organization,

> The Notation-Graph is a model of the Grand Staff mounted on a cork base to which the various musical symbols may be attached with ease, thus making it possible for the blind to express musical phrases in the notation used by the seeing.

Recreation

"What do they do for amusement?" "What can they enjoy?" "What do they do with their leisure time?" Repeatedly these questions are asked by visitors to schools for the visually handicapped, and how surprised are they by the answer: "Almost anything that amuses you. They enjoy, without limitation, almost all of your own—the seeing person's—

recreational activities." The person of normal vision little realizes how wide is the scope of the blind person's interest and how manifold are the opportunities for his recreation. Because of the individual differences found in a group of visually handicapped children, it is as absurd to speak of the capabilities or of the interests of the blind as a group as it would be to conclude that the population as a whole is interested in any one sport. When a game is adapted for use by the blind, the alterations must be relatively simple so that the original form of the game is not lost. If the mechanical devices are too complicated, the interest of the groups will lag either from technical difficulties in understanding the play or from the fact that the game is no longer the one played by sighted people.

Blind people have actively participated in the field of sports: track, crew, modified forms of baseball and football, wrestling, hiking, skating, cricket, and in one case at least golf. Sometimes blind persons enjoy these sports in successful competition with seeing people, often they are enjoyed vicariously from descriptions over the radio. However, with the exception of the "sound" baseball game invented by Mr. Robert Chandler, Superintendent of the Industrial Home for the Blind, Oakland, California, few mechanical aids are in use. The ball used in this game is the size of an indoor baseball, but it is manufactured with a bell in the center so that, when it is rolled, its progress is audible. The bat is an ordinary hockey stick reinforced at the bottom with a flat piece of iron. In the center of each base an electric buzzer is placed. These buzzers, each base having one of a different tone, are operated from a switchboard near the home plate. These bases are connected by runways of wooden rungs, 2½ feet wide. The game, with certain modifications in rules, is similar to baseball.

Although "sound" baseball was enthusiastically received by the men at the Industrial Home, the majority of the boys at the California School for the Blind still prefer their own form of the game. The modifications which they have introduced

are in the methods of play and not in the equipment for the game. A standard ball and bat are used, but the batter has the privilege of electing to receive the ball on the ground. When the ball is rolled, the batter rests on his knees on the ground with the bat touching the ground and swings at the ball when the catcher calls, "Swing!" Both the pitcher and catcher usually have some vision. A "caller" stationed at first base shouts to the totally blind boy after he has struck the ball. If the runner reaches first base safely, he is assigned a "runner" who runs around the bases with him.

The most useful device for bringing vicarious experiences in sport to the blind is the radio. In the majority of cases, the visually handicapped person prefers the play by play description over the radio to attending the game although totally blind students are known to travel distances of 900 miles or more to witness important football games. The open air and the noise and obvious enjoyment of the crowd produce an objective reaction in the blind person. Likewise, while the blind as a group enjoy dramatic presentation over the radio or on the stage, some do not particularly enjoy attending motion pictures. They complain that they cannot follow the plot in many instances. Experiments have been successfully performed in which the continuity has been recorded and is available to the blind through earphones which are placed in certain seats in the theater. However, the cost of the apparatus and relatively small demand will probably prohibit its widespread use.

Many indoor games are played by the blind: braille anagrams, tango (sometimes called lotto or bingo), checkers, chess, chinese checkers, dominoes, the usual card games, table tennis, touchdown, bas-ket, klik ball, carpet bowls, desk quoits, and many others. Of all these games, the most popular at the California School for the Blind is chess. In one year the chess club has increased from three to twenty-one members. During that time the club had engaged in matches with teams from four nearby schools. Two of the games were won by substantial margins while the other two were lost by only one or two

games. In this field, then, much to the surprise of most people, the blind person can successfully compete against the sighted one. In England where chess is more popular than in the United States, blind men have held high national rankings.

Only slight changes were necessary for adapting the chess set for use by the blind. The chess and checker board have the light or the dark squares slightly raised so that they can be discerned by touch. In the base of each chess man is a small peg which fits into a hole in the center of each square, thereby preventing the men from being disarranged while the player is studying the game. The white chess men have a slight point on the top so that they can be distinguished from the black. Since the different types of chess men are easily identified, no other changes are necessary.

For checkers, the same board as described above is used although, if only checkers are to be played on the board, the holes in the center of each square are not necessary. The men for one player are round and of one color while those for the other player are square and of a different color. Both types of men fit securely into the depressed squares. One side of the men is unmarked; the other has a hole in the center. The unmarked side is up until the man becomes a king, at which time the man is reversed to expose the side containing the hole.

The changes in the other games necessary for rendering them intelligible to the blind are as simple as those described in detail above. As demonstrated, there are several criteria to be used in evaluating a new game. Are the mechanical devices relatively simple? Are the parts sufficiently secure to permit examination by touch without disruption of the game? Can a seeing person play the game with a blind person? In order to satisfy these criteria, dominoes have been constructed with the spots raised and the men interlocking. In the game of tango, both braille and print numbers are used on the boards. Slips of paper containing both braille and inkprint numbers and letters are drawn from a box to determine the space to be filled on the board. In place of beans being placed on the

number, corks are fitted into holes to indicate occupied positions. The equipment most easily converted into use for the blind is the deck of playing cards, each card in the ordinary deck being marked in braille next to the print number, with the number and the first letter of the suit. For Chinese checkers, the ordinary board is used, but wooden men of six different shapes, as well as colors, are used. Since the base of the men is only slightly smaller than the hole in the board, the men are held firmly in place.

The above description of only a few games clearly reveals the recreational possibilities for blind people. The number of games in which they can successfully engage is limited only by the number of games available. All that is needed in most cases is a slight modification of an existing game, but, above all else, it is necessary for contestants of normal sight as well as for the blind, to comprehend these possibilities. Instruction and practice in many types of games should be a very definite part of the school program either through actual classroom instruction or through supervised extracurricular activities. The school benefits through a decrease in the number of disciplinary cases, and the child benefits beyond measure. A great many cases may be cited in which maladjusted children have become relatively normal social beings through recognized achievement in certain games.

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An Individualized Approach to the Problems of Blindness and Impaired Vision

MILTON H. KLEIN

MODERN psychiatry, which is the very life blood of the science of generic case work, attempts to understand the individual through his reaction to a series of life experiences common to all of us. These experiences include birth, nursing, weaning, love of mother, love of father, aggression toward father and mother, and adolescence, to name only a few.

It is an accepted fact that individuals have both conscious and unconscious reactions to all of these experiences. In dealing with any individual in difficulty, therefore, the case worker attempts to make it possible for the client to learn for himself what his feelings, recognized and unrecognized, are toward these experiences and thus to find out at what point in his development some experience, or experiences, were so destructive as to shatter his self-confidence and make it difficult or impossible for him to take the next step in his growth. The positive experiences are also studied so that the individual comes to accept himself as he is and begins to build on what he really is. This understanding of his own reactions on the part of the client is necessary in order to enable him to overcome the difficulty which confronts him or the feeling of lack, or inadequacy, that he experiences.

The foregoing paragraphs contain a brief description of what practicing case workers understand by the case work relationship and its use in treatment. In this paper we shall be concerned with determining whether, through the case

work relationship, blind clients can achieve the same kind of understanding of their problems and their feelings toward them as clients with other difficulties, limitations, and handicaps can get from the worker-client relationship. It is my belief, based upon several years of work with the emotional problems of visually handicapped clients, that this understanding can be attained over a period of time in much the same way as it is achieved by clients with normal vision. The case worker, working with the emotional adjustment of blind and visually handicapped clients, must realize that in our highly competitive modern society blindness, or impaired vision, is a very decided handicap to any individual. Yet an adjustment which is tolerable to the individual himself, as well as to the group in which he lives, may be worked out if the client learns to accept his limitation, or lack of vision, and to function as an adequate individual making full use of his remaining senses.

While treatment seeks to achieve understanding and acceptance of his limitations, it cannot stop here, but must provide the individual with positive ego values as well. This is necessary because the ego of any individual, blind or sighted, is that part of his personality through which he establishes and maintains intercourse with those about him. Consequently it is most likely to suffer from environmental reaction and usually needs to be strengthened to enable the client to carry on.

If ego enhancement is the keystone of treatment, the question arises as to how it may be achieved. Case workers have found at least three ways in which this can be done. John A. Reimers, Professor of Case Work at Ohio State University, summarized these very well in a paper titled, "Enhancing Family Life" delivered at the Ohio Welfare Conference of 1939. We quote:

> . . . first, acceptance and recognition of the individual by other people; second, having available and being able to use a reasonably nourishing outside world; third, establishing flexible and conscious diplomatic relations between the ego and basic life drives.

Let us discuss these in turn as they apply to any individual in difficulty and more particularly as they have a bearing on the treatment of clients who are blind, or who have had a visual difficulty since infancy.

To accept any individual as he is we must understand his growth processes. With particular reference to ego development we must know how his parents treated him in infancy and early childhood. The treatment he receives here in terms of affection and encouragement, or dislike and discouragement, will in large measure condition his responses in adult life toward people in the outside world. At the outset of life experience the ego of any child is weak. Parental encouragement and affection tend to strengthen it and thus to give the child self-confidence in his earliest milieu. The opposite treatment tends to bring about the opposite result. It can be readily seen, then, that to the child security is essential for ego development.

Before going further, may we analyze the concept of security. For purposes of discussion it may be broken down into two parts: (a) internal security, that is, the security which the child himself feels about himself; and, (b) external security, which is afforded him by his environment. Of internal security the child has very little. That is why the security of his environment, which in early life means parents, must of necessity be greater.

The difficulty in the case of the blind child, or the child physically handicapped in any other way, is that the parents tend to provide too much external security for him, thereby throttling, instead of fostering, ego development. They do this by doing more for him than they would for normal children, thus making it impossible for him to gain confidence by doing and succeeding. Some one has said that "nothing succeeds like success." If, in these early years, then, the child has little or no opportunity for success in any enterprise, he will have only scant experience upon which to base confidence in adult life. In fact my observation would lead me to say that the amount of self-confidence and independence that an adult

blind person manifests is in direct ratio to the amount of opportunity he has had to do things for himself and for others as a child. The emotional development of the blind child is further complicated by the fact that, because of the overprotection on the part of parents which gives him external security, his internal security is correspondingly decreased. Thus he needs to "hang on to" early self-regarding attitudes longer than do normal children, or perhaps cannot grow beyond them at all.

We have said that one method of ego enhancement is the acceptance of the individual as he is. It is often necessary to go beyond mere acceptance and to encourage ego development by direct praise and approval. This is a treatment commonly used by case workers and is applicable to the treatment of sighted or sightless clients alike. By this direct approach early frustrations may be understood and their effect minimized or overcome.

The second method of encouraging the ego is that of modifying the environment in such a way that the ego, which for some reason has become temporarily overwhelmed, can function more adequately. This is sometimes known as "manipulation of the environment" and calls for skill on the part of the worker in relating existing resources to the client's needs or creating new resources for the solution of his problems. While it may be used in cases in which the blindness has been present since childhood, it lends itself particularly well to the treatment of the newly blinded individual. In this type of situation it may take the form of further education, vocational retraining, or preventive and follow-up medical care:

It is, however, not applicable to the adult blind alone, but could be used to a greater extent than is at present common in the treatment of blind children in various stages of their chronological and emotional development. I am referring to the method of educating blind children. At the present time we are not only providing these children with special education but a special environment in which that education takes place. The special education is necessary in order that blind

children may learn to use the appliances and devices developed for the use of the blind, but the special environment, namely the residential school, could be relegated to the horse-and-buggy era where it belongs. Many gains of an individual nature, as well as of a social character, would result from the increasing use of public schools by blind children. While it is not within the scope of this paper to comment at length on the implications of institutional education in the personality development of blind men and women, I should like to make a few observations on the gains that would result from a more extensive use of the plan under which blind and seeing children are educated side by side in our public schools. I should like to do this because social workers, who are just beginning to work with the problems of the visually handicapped, do not always realize the permanent effects which an institutional environment is apt to leave on the personalities of growing children.

The greatest gain to the individual would be that his adjustment to the sighted world, which he begins to make in his family situation, would not have to be interrupted by years away from this group. The child's relationships would continue, and the school experiences with sighted children would furnish a more normal pattern of development for him. Competition with sighted schoolmates would more naturally lay the foundation for successful participation in the economic and social activities of the community in adult life. The blind child would have a more accurate measuring stick for his abilities and limitations, and, upon completion of his education, would not have to go through a period of readjustment to a world he did not know. So many of the graduates of residential schools, I fear, have come to accept the interest of the state in their problems as their due. The world-owes-me-a-living attitude is much too common. This would not be so if blind boys and girls were closer to the everyday economic problems of their families. At least one social gain would be the better understanding that both blind and sighted children would acquire from daily contact with one another.

Of course I do not mean to imply here that the residential school for the blind has altogether outgrown its usefulness. There are children who see, who must, for one reason or another, be segregated from their fellows. Likewise there are blind children who have complicating problems, needing a special environment. On the whole, however, I feel that the education of the blind and the seeing should parallel each other, both in content and environment.

Let us return to our central thesis, the encouragement of the ego by manipulation of the environment. One type of situation in which this procedure is extremely important is that of the newly blinded individual. As I have stated before, this type of treatment requires skill on the part of the case worker; in fact, just as much skill as the other two. In the past one mistake frequently made was in the assumption that the individual who had recently lost his sight needed to endure a long period of adjustment to his new situation. We waited until the solicitude of family and friends created a situation so satisfying to the individual that it counterbalanced the urge to face life now further complicated with a new and frightening handicap.

Every effort should be made to bring existing resources to the aid of the newly blinded individual at the earliest opportunity. Instead, therefore, of being exposed to the well-meant, but damaging sympathy and commiseration of family and friends, the client may undertake a program calculated to prove that he can still carry on many of the activities in which he was engaged before the loss of sight and that new ones may be found to take the place of those which he can no longer pursue. In this respect the attitude of the Seeing Eye, Inc., seems to me very sound, for it bases its acceptance of a client for training, not on the duration of his blindness, but rather on his potentialities as an individual as determined by a comprehensive study of his past experiences and future objectives.

Making available teaching and case work services to newly blinded patients while they are still in the hospital is also a step in the right direction. In this connection I might make these observations: The blindness of the worker or teacher

seems to play an especially helpful role only in the teaching of newly blinded individuals. Newly blinded clients seem to find the adjustment easier when they know that the person who is teaching them, or working with them, has the same type of physical handicap. In general, little is known concerning the reaction of blind clients to blind workers. I think, however, that the attitude of the worker toward his own handicap would be the definitely determining factor. Doctor Chamberlain, psychiatrist of the California Department of Public Welfare, suggests that this whole area merits further study.

The third method of encouraging the ego is to bring about a harmonious relationship between it and basic life-drives; to correct the disharmony in the personality which results from the fact that the ego is either so weak that it cannot consciously cope with accepting the instinctual part of the personality or so strong that it represses it entirely. Conflicts between the ego and the super-ego, or conscience, sometimes also need resolving. It is in this area that the psychiatrist, rather than the social worker, can function to best advantage, for the task of establishing a harmonious relationship among the parts of an individual's personality requires technical training and special skill. While some social workers trained in the elements of psychiatry can and do deal with these problems effectively, intervention by the psychiatrist is sometimes necessary, and, provided he is trained in the psychoanalytic approach, usually helpful. Unfortunately, psychiatrists have had little opportunity to study and treat the emotional maladjustments of blind individuals. While the emotional problems of sightless men and women do not seem to differ fundamentally from those of patients physically handicapped in other ways, the utilization of a psychiatric approach to intra-personality problems would do a great deal to widen our knowledge of the special channels which the basic drives of visually handicapped patients need for expression. I am thinking here of psychiatry in its extra-mural or out-patient, rather than hospital, applications. When an individual is so mentally ill that he requires

hospitalization, the chances for his improvement are very limited.

It may be seen from the foregoing paragraphs that the basic emotional problems of blind and sighted clients are similar and that their treatment can follow parallel lines. The intensity of any emotional problem varies among blind as well as sighted clients. It is this difference in intensity which the case work relationship must attempt to estimate, evaluate, and then treat on an individual basis. The same broad understanding of the basic elements in human behavior, the same accepting non-judgmental attitude which comes from broad experience, are necessary in the treatment of any client, regardless of his physical handicap. The case worker must approach the problem of any blind client without a preconceived notion of the adjustment that the client will or ought to be able to make. This is a point which case workers dealing with blind clients sometimes overlook. They seem to feel that, when an individual becomes blind in adult life, all his responses tend to change as a result of that one fact, whereas, on the contrary, such a client must respond to blindness itself in the same terms in which he has responded to life's other problems.

The blind person's attempt to make a satisfactory adjustment in terms of his own feelings about himself and the feelings of the community toward him is, however, complicated by one more factor, the inclination on the part of society to classify all people similarly afflicted into one category to be treated alike regardless of individual differences. This tendency on the part of the sighted to consider the blind as a group has had disastrous effects on the lives of all the blind. They have either had to conform to the pattern into which society attempted to mold them or they have had to rebel against it. A good example of what I mean may be found in the blind beggar who, after all, is only taking full advantage of an attitude which society has been building up toward the blind for hundreds of years. The beggar may be able to support his family more adequately than the client who, though educated to be a teacher, can find no opportunity to carry on his profession and

is accepting a "blind pension." Society despises the one and pities the other. It has done little, if anything, to make it possible for the one to put his talents into more constructive channels, or for the other to make use of the education which it has provided.

It is my feeling, therefore, that case work treatment directed toward ego enhancement, as suggested in this paper, would be instrumental in making it possible for the blind person to achieve his individual design for living and would thus remove the necessity for his rebellion against, or resignation to, society's refusal to permit him his fullest measure of adjustment.

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The General Case Worker and the Blind

MARGARET BARNARD

BLINDNESS is only one of the several severe physical handicaps from which clients of our case-working agencies suffer. Deafness, severe crippled conditions, tuberculosis, and diabetes are among the others. All may be adequately handled within a general case load if the case worker knows and makes full use of specialized resources.

Deafness, like blindness, may be congenital, occur at birth, or may develop gradually or rapidly at any later period. The time of life when deafness occurs affects the problems presented by the client. Congenitally deaf persons must have special training and education from early infancy until education is completed. Those who fail to receive this training may now be known as "deaf and dumb," and are thus doubly handicapped socially and economically. Congenitally deaf persons may need educational and vocational training in a special school for the deaf. The families of these persons may need a case worker's help in accepting their disability and working through it. Such persons will need suggestion as to available training, employment, and recreation. Those who become deaf later in life may need help in lip reading or in the use of mechanical aids. They may need extensive and expensive medical care. Deafness may mean loss of a job and vocational re-education may be in order, or at least vocational advice.

A spastic paralysis victim presents a very serious educational, medical, economic, and social problem to the case worker. A family with such a child will need to be guided to the best of medical clinics. Special vocational training must be supplied. The patient may develop serious emotional disabilities. The other members of the family may pity him, shield

him, be ashamed of him, mistreat him. Every member of the family will need to be shown how his attitude toward the patient will affect the patient's recovery and adjustment. These problems may be less severe but still present in cases of poliomyelitis, clubfoot, serious spinal curvature, or severe arthritis.

Tuberculosis brings special problems, not only economic and medical, but also emotional. Institutional care is not enough, for it is the point at which the patient returns to his own family that there is the greatest danger. Special vocational training and advice may be needed if the patient's previous occupation is not one to which he can safely return. Protected employment may need to be provided. Sleeping facilities may need to be provided. Sleeping facilities may need amplification. Special diets may have to be supplied and with them the instruction that is equally necessary. Continuous medical supervision will be required for several years, not only for the patient but for all members of his family, who by his infection have become "contacts."

Diabetes presents just as many complications to the case worker as does tuberculosis. Doctors and nutritionists will certainly be needed. The addition of a special diet always complicates the housekeeping and is an added economic handicap. Yet the diabetic, like the tubercular patient, the cripple, and frequently the insane or feeble-minded person, remains a member of the household or returns after a period of hospitalization. A general family case worker will help to secure accurate diagnosis, help to plan for proper treatment, assist economically, if necessary, watch for and treat destructive emotional reactions, either on the part of the patient or his family, and, if possible, work out through vocational training or advice a plan for the self-maintenance of the family. The worker is always concerned with the family as a unit even while planning for the one person within it who presents the most acute problem.

In the same way I believe that a general case worker can intelligently include within his case load families where there is a blind person, either as parent or child. If the blind person

is an adult and has been blind since birth, he will, at least in most states, have received special education, vocational training, and whatever medical care is recommended. But in an economy where there seems to be so large an oversupply of labor, any handicapped person must be very good to get and hold a job. Many jobs are closed to him because of his handicap. In those which are not closed, he must compete with sighted persons and be at least as good as they. It is natural that in periods of unemployment, the youngest, healthiest, smartest, most ambitious workers would be hired and retained. Those of a wrong color, those past middle age, those with physical or mental handicap are apt to be the last hired and the first fired. To a general case worker this means that the family with a blind breadwinner may need more relief and need it longer. All unemployed breadwinners have been subject to discouragement, to a sense of defeat, to a sense of guilt. Some have developed rather vague disabilities that become the excuse for their failure. A blind man has a real disability, and, if not encouraged, and at times pushed into self-maintenance, he may fall back on it as his excuse for economic failure. The case worker will not only work on the blind person but also on his wife and perhaps on his children, teaching them the importance of maintaining his morale, his independence. He may find him work relief, or, if even this substitute for a real job is not available, may keep him busy improving the home, participating in community activities, or training for a better job. The case worker may call in a technical specialist from a bureau for the handicapped or a bureau of services for the blind to advise the client vocationally. He may then use special educational facilities, if available, or a workshop for the blind, or a person specializing in securing employment for the blind. But the case worker will also call in agencies that do not specialize in the blind. If his client was raised on a farm and has a desire to get back there, and his wife wants to try farming too, he may use the Federal Farm Security Administration to make the necessary loans. He would then call in a county agricultural agent to

advise. If the client plans to stay in his former occupational field, the State Employment Service will be used.

If the blind breadwinner is a victim of an accident or disease that caused blindness in middle life, he presents a different problem educationally, vocationally, and emotionally. First, there will have been the problem of expert medical care, then the problem of the client's emotional reaction to his blindness. He may withdraw completely; he may retrogress physically and become very dependent if not properly treated. He may become bitter, irritable, and thereby unemployable. The relationships of his wife and children to him are of inestimable importance at this point, and the case worker will help them to understand him. A psychiatrist may be needed at some point in the patient's treatment.

The case worker will want to call in an expert, preferably blind, to teach the patient how to take care of himself and get about safely. Such an expert will also teach the family what not to do. Again special vocational advice and training may be necessary but these are readily available to the case worker, at least in the more densely populated states. Perhaps an older son can share the economic responsibility; perhaps relief will be needed. The chances are that some other member of the family may present an equally serious problem. Troubles rarely come singly, it seems. The wife or child may be ill, a child may show delinquent tendencies. Sometimes a child who is only a minor behavior problem when all is going smoothly in a family becomes a major one when all the attention of the family is centered on someone else and he feels neglected. This is something a case worker will watch. Some other member of the family may develop a disability of psycho-neurotic origin to get his share of the mother's affection and attention.

If it is the wife who is blind, she may need help from a home teacher with her housekeeping, especially if blindness is recent. Here, again, the other members of the family must be helped in their relationship to her. She must never be allowed to withdraw from her responsibility in the family. She may

present any of the problems that a blind father would present and need as many kinds of help.

If it is the child who is blind, there will be problems of possible medical care and education. Probably he will attend a special school for the blind as soon as he is old enough, but his preschool years will need the intelligent participation of case worker and family if he is not to be spoiled by too much attention, or made too dependent, or acquire any one of a great number of possible wrong behavior patterns. He will have all the usual hazards of preschool age and a few special ones besides. The family must not revolve about him, but rather he must be just one unit in a well integrated group, sharing responsibilities as well as privileges, even at that early age. The case worker should ask the advice of a person skilled in handling blind children about special training needs, but much of the training will be the same that every preschool child needs. If there is available a specialized preschool worker for the blind, she can help in removing accentuated behavior reactions, offset fixations, and advise parents how to develop speech, tactual, and spatial relations. A blind child must not, however, get more than his share of attention, or it will hurt not only him but the other children in the family who may feel neglected and jealous. A general case worker will be just as interested in the development of the sighted children as of the blind. He will be aware of their reactions to the blind child, as well as those of the blind child to the world about him. As the child comes home for holidays and vacations, the case worker will make sure that he quickly fits into the family scheme, is included in all plans, and participates in all activities with sighted persons. While the school gives him special skills, the case worker helps him take his place in a sighted world, participating unself-consciously in the regular activities of family and neighborhood life. Blind people are not repulsive nor even less attractive than sighted persons. Sighted people quickly forget the handicap and enjoy them for the qualities they have, not worrying too much about the one thing they have not. The earlier the blind child can learn this, the better for him and for his family and friends.

Unfortunately, blindness is frequently accompanied by some other disability, either as a result of accident, illness, or congenital defect. The case worker then has to treat the client, remembering both handicaps as he plans with him his economic, social, and family life.

A large proportion of all blind persons are past sixty, with blindness just one of the symptoms of old age. The case worker's job is simpler here, for there is no vocational training needed. But all aged persons have adjustments to make as their activity is curtailed, their usefulness lessened. They are apt to feel they are a nuisance, a bother to their children, an economic handicap. They may become irritable at their enforced leisure. New interests must be developed, new ways of feeling worth while and important found. Old people who become blind are not very different from those who become deaf or crippled with arthritis, or bedfast after a stroke of paralysis. They need kind and sympathetic care and attention, preferably from their own families. They need more or less medical care. If blind they may want to learn braille or learn some new form of handiwork that doesn't need eyes. For this a blind home teacher may be called in by the case worker. Such a home teacher will help the worker to understand the emotional reactions of the client, as well as meet his recreational problems. But, fundamentally, such a person does not present a problem of blindness, but rather of old age with its attendant disabilities.

It should be realized that blind persons present to a case worker problems that are not so different in their variety, their intensity, or their difficulty of solution from those presented by other clients with other major physical or mental disabilities. Many of a blind person's problems are those he has in common with the rest of the world. A few are specialized, and many are intensified by his handicap. But by calling in the appropriate experts—medical, educational, and vocational—a general case worker can make sure that these specialized problems are intelligently tackled. Beyond that he will work with the family as a group, studying the various problems each member presents, and his relationship to all members of the

family. He will do what he can through relief, through suggestion of facilities and resources, through friendly, understanding interviews, to help each one work out his own salvation, not just as an individual but as a member of a family, of a neighborhood, of a community. If there is a blind person in the family, he will be helped to adjust to a sighted world, and his sighted family will be taught to include him in their world. If the family needs relief, the budget can be individualized to meet special medical, educational, or diet needs. This has to be done to some degree for every family.

Blind people are not alike. There are just as many differences among them as there are among the rest of us. Some are outgoing, friendly; others withdrawn, shy. Some are independent, ambitious; others are dependent, physically lazy. Some are intelligent, some are feeble-minded, some are artistic, some are practical. These variations have little to do with blindness. Even with sight many would be failures, and even with their handicap many others are notably successful.

Our caseloads are full of handicapped persons, or families whose economic heads are handicapped or deceased. Death, disease, accident, congenital defect, all take their toll, and, when added to the economic hazards to which all families are exposed, bring many of them in to a case working agency, public or private. Each case needs careful study and individualized treatment, making use of all available appropriate facilities. Blindness is only one of these handicaps and, I believe, should not result in segregation either of the individuals so handicapped or of the families of which they are a part. A good general case work program, whether under public or private administration, can meet their needs intelligently.

Suggested Readings

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Methods of Community Participation in Programs for the Blind

GWEN HARDIN

IT IS a truism that any public assistance program can go only so far as it has public understanding and support. It, therefore, behooves a public agency to build its foundation of understanding in the community where it hopes to work toward definite accomplishment.

Social treatment of blindness means, to the public agency, assistance to the blind person in adjusting to society so that he may take the place in the community which he would have taken if he had not been deprived of his sight. It means also developing in the community an understanding of needs and abilities of the blind person, so that the community will expect him to fit into his rightful niche among them.

The fact that a person loses his sight does not mean necessarily that he changes in personality, temperament, or ability. It does mean that it is necessary for him, in many instances, to have the opportunity for retraining so he will realize fully the ability to carry on which he has. Often it means redirection of the individual's abilities. There is about as much logic in looking upon blind people as a group, or of thinking that a person is different just because he is without eyesight, as to consider all one-armed people as a group apart, or all social workers alike just because they follow the same profession.

We have attempted through the Division for the Blind of the Washington State Department of Social Security to develop in the community and through selected groups a general understanding of blind people. To counteract the all too common emotional or "sob-sister" attitude, an effort has been made to give local clubs, such as the Lions Clubs, other service

clubs, and women's clubs, definite projects to do. This isn't as simple as the last sentence would seem. There is a great deal of work to be done in helping any group to become imbued with the proper philosophy regarding blind people. Genuine and whole-hearted interest on the part of the local group in the possibilities of intelligently assisting blind people is important. After this basic work has been done with the local group, definite projects can be discussed.

The Lions Clubs and the Junior Federation of Women's Clubs are already committed state-wide and nation-wide to special interest in the blind so that these groups are particularly effective to work through in a state-wide program.

Through the vending stand program, which in our state is sponsored largely by the Lions Clubs, business men have come to realize the ability of a carefully selected blind person to conduct a business in an approved businesslike manner, and from this experience these men will tell you of the opportunities open to blind people and prove this by helping the vending stand operators to broaden their interests so that they are contributing to the welfare of the community just like any of the other small business men.

In the state of Washington the Division for the Blind felt that much could be accomplished through the Junior Federation of Women's Clubs in a program of friendly visiting to the blind. In 1936 the Junior Federation in our state made a survey of the blind. During the following year the project of the Women's Clubs was a study of ophthalmia neonatorum, and, in the latter part of that year, speakers from the various clubs went out to the other club groups as a community educational project of their own in the hope that knowledge regarding ophthalmia neonatorum and its treatment would be made available to the majority of persons in each community.

A year ago the Junior Women accepted the project of a friendly visiting program to be carried on over a period of years. During the two previous years they had had the opportunity to learn to understand the entire program of the Division for the Blind, as well as other services in the state available

to blind people, and to build up within their own club a philosophy toward blindness which would make it possible for them to give a real service to any blind person through friendly contacts. The local clubs worked very closely with the county welfare departments, which have the responsibility of administering public assistance to the blind and of assisting the State Division for the Blind in keeping an accurate register of all known blind persons. Friendly visiting is not thought of for the person dependent upon public assistance only, but is extended in a greater or lesser degree to every known blind person within the county. The club members who are to become friendly visitors are chosen very carefully by the chairman of the project within the club. Every effort is made to give such an assignment to the club member who is most apt to have common interests with the blind person. The friendly visitor accepts the responsibility, not for one call, but for a continued friendly interest on a neighborly basis. She calls on the blind person just as she would call on any newcomer in her community, except that she goes to the home with a definite intention of finding some common ground of interest which can be developed.

This has proved to be a successful undertaking. Blind persons with very few outside interests, are, through the contact and friendship with some vital, wide-awake woman in the community, becoming interested in garden clubs, bridge clubs, or study clubs, or have gone back into the women's aid society of their church.

With growing understanding among at least certain members of the community, the ground is cultivated and ready for an effective program development, a definite part of which is the home teaching for the blind. Home teachers, themselves blind, who are properly selected are a living interpretation in any community in which they work that a blind person is just as normal as any other person. They can probably do more than anybody else working in the Division to readjust attitudes of relatives and neighbors. One of the great problems that we have had to face in the past is that the well-meaning relatives

and friends simply would not let a blind person be just a natural human being. The greatest opportunity and duty of the home teacher is to teach blind people the enjoyment of ordinary day-by-day living. A part of this teaching is the adjustment of attitudes of the relatives, other members of the household and of the people within the group where the blind person should find his normal activities and enjoyments. To quote one of our home teachers: "To a blind person a friend is not one who 'will back us up to a chair and bend our knees' but rather a person who will make us forget we're blind."

An interesting example is a middle-aged man who had been very active in the church brotherhood, but when he lost his eyesight he dropped out of the organization because he couldn't get around by himself. The group always had a dinner meeting, and he was too self-conscious about his inability to eat nicely. Because the other members of the brotherhood class didn't know the possibility of re-education for this blind man, they let him drop out of the class. Through the home teacher he was taught to get about by himself, to get in and out of an automobile with ease, to eat properly so that he need have no hesitancy about going to a public dinner, to read and write braille and to type, so that he himself could keep up on reading and would have means of written communication. At the same time the home teacher was interpreting to some of the more active members of the brotherhood that this blind person had much to contribute to their group and that he could continue to be as much of an asset as before he lost his sight. Today, that blind man is one of the more active members of the class, doing a great deal of the correspondence and calling that should be done but usually is not. We feel that this was real rehabilitation.

Another instance was that of Grandma who was taken into the home of her daughter when she became blind and was given a rocking-chair and a radio. When she wanted to move, either the daughter or one of the grandchildren helped her, or tuned in her radio programs for her. The family had come so close to killing Grandma with kindness that she was actually

looking forward to the day of her death. After a month's association with the home teacher, Grandma was knitting sweaters and caps for the children, had pieced a comforter for the daughter, made new rugs for the bedroom and bathroom floors, and was preparing all the vegetables, doing the dishes, and carrying on numerous other household activities. It is needless to say that the whole family is much happier and now Grandma does not see how her daughter can ever get along without her.

One of the most important services is to reach the newly blinded before they get "rocking-chair-itis." Here again a public agency covering the whole state must look to the local community for information regarding such persons. We have found that, where a home teacher is working in another part of her territory, she can do much to keep a newly blinded person encouraged by writing to him and telling him when she will be in his community and, through correspondence, build up enthusiasm and interest.

Less closely related, but still dependent upon community interest are the vocational aid and training activities, which form a part of a well integrated state program of social treatment. In all of the vocational aid and training work carried on, the human values in developing individual dexterity and ability to produce are immeasurable. The fact that a person can become self-supporting through this training is secondary. Here again I have been impressed in the past with the fact that blind persons were expected to become interested in making brooms, mops, or baskets, or in some similar type of work without recognition of the fact that any person's work, whether he is blind or seeing, should be related to his abilities and desires, whether they be professional, artistic, or mechanical. Through vocational conferences these abilities and desires can be brought into self-expression, and then the problem of the agency is to fit, as nearly as possible, the life work of that person to his abilities. There isn't very much social treatment in putting a person with a very artistic temperament at a broom-winding machine, and it is no wonder that, as a

rule, he is not enthusiastic about this work. That same artistic person, if taught ceramics, can create articles of commercial value which he knows by touch to have real beauty and art. He will find enthusiasm in his work, and it is surprising to watch how his interests will broaden out. The same is true of the person with a mechanical turn of mind who is given chair-caning as his life work.

One means of reaching the community which has proved effective for the Division for the Blind in Washington is found in the State Advisory Committee. This committee is made up of representatives of professional, business, and club groups. They bring to the Division the reactions of the people and also serve as interpreters to their many daily associates. Their services are advisory, not administrative, but policies and plans are discussed with them before final formulation.

Sub-committees branch from this committee, with only the chairman a member of the State Advisory Committee. One sub-committee which has played an important part in the home industries program is made up of merchandising men. They bring suggestions of articles for production and advise on quality of merchandise and cost prices. Their services are indispensable to the home industry work, and they know it and have accepted the assignment. The same is true of the Medical Eye Advisory Committee, the members of which are eye physicians active in the prevention of blindness and restoration of vision program.

While these committees are advisory to the Division for the Blind, they also perform an advisory and informational function in the individual community groups, which is of equal or even greater value.

All that I have said could be summed up perhaps in just this one sentence—blind people are still individuals, and if we are ever to succeed in social treatment programs with blind people it must be done on an individual basis, but with full community interest and understanding.

Sir Arthur Pearson summed up social treatment of blindness when he said:

Happiness comes from doing, from exercising one's creative faculties, whatever they may be; and he who finds ample opportunity for fundamental expression needs no one's pity. . . . Don't pity the blind. They don't want your pity, and they can't use it if you give it to them. There *is* something they want, and something for which they have a right to ask—that is, the normal spirit you are willing to extend to equals everywhere. Cooperate with the blind man, and you will both be stronger for it. Pity him, and you will both be weaker. Pity exhausts the giver and demoralizes the recipient.

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Home Teaching in the State of Washington

BETTY THORSEN

IN COMPARISON with other states, the home teaching program in the state of Washington is in its infancy. Although home teaching was inaugurated in Philadelphia in 1882, it was not until April of 1937 that anything definite was done about it in this state. At that time, home teaching was included in the program of the Division for the Blind, State Department of Social Security. Home teachers began active service in October of that same year. In the three years following, the program has blossomed and grown in scope.

In the summer of 1937, the State School for the Blind was host during a four week training course for home teachers. Several girls throughout the state were in attendance. After the course, the teachers were chosen on the basis of a merit system examination. Each summer the home teachers are required to take courses at the University of Washington for four weeks. It is hoped that a definite course for home teachers will be mapped out at the University, so that any person wishing to, may prepare herself for that service. The home teachers were given training in handicraft, cooking, sewing, teaching technique, interviewing, and problem solving. General information was also given concerning the other departments of the State Department of Social Security and other programs sponsored by the Division for the Blind.

A home teacher in this state must be a high school graduate of from twenty-one to forty years of age. She must be able to read and write braille and Moon type and have acquired reasonable proficiency in the household arts such as sewing, cooking and handwork. A knowledge of simple basket weaving is also required. Any additional education is advantageous.

The applicant for a home teaching position is expected to pass a physical examination. No one with over 20/200 vision in the better eye will be accepted. Preference is given to those more nearly blind. It is felt that the blind teacher will serve as a stimulating example to her pupil. Beyond a doubt she understands the problems that come with blindness better than a sighted person who has never experienced it.

The home teacher, herself, must be a living example of her work. In order to help others, she must have a real desire to serve and a genuine interest in people; she must have sympathy, insight, and an understanding of the problems of daily living. It is necessary that she achieve in her own living a satisfactory adjustment, so that she may help others with their problems. Although the home teacher's position is essentially a teaching position, she finds many personal problems which she can help unravel. To evaluate the ability of her pupil to learn is one of her chief responsibilities. There are those whose sense of touch is too poor to read raised type. In such cases she finds other tasks about the house which the blind person may do or outside chores to renew his interest. The enjoyment of a full normal life is his aim and it is the home teacher's pleasure to aid in this achievement.

The reading and writing of braille and Moon type, typewriting, knitting, crocheting, rug making and basketry are the subjects most often taught. However, the teacher is expected to meet whatever need arises—be it teaching a pupil how to wipe dishes, or how to mow a lawn. The variety of tasks taught by the home teacher is infinite. Learning to darn her own stockings may make Mrs. Jones happy, while learning his way from the back porch to the woodshed will be just the thing to make Mr. Smith feel useful. A few specific instances will be cited later to illustrate this point. First, however, let us discuss the actual mechanics of home teaching.

A register of all known blind persons in the state is kept by the State Department of Social Security, Division for the Blind. It was greatly facilitated by the Junior Federation of Women's Clubs, who, in 1936, made a survey of all blind persons.

From this list of blind persons, and those known by the welfare department, the home teacher gets her pupils. As time goes on, new names are being added.

At present there are four home teachers employed by the state, although more are needed. The state has been divided into districts, with several counties in each district. The home teacher works out of the county welfare office but is supervised from the Division for the Blind state office. She may be stationed in a county anywhere from two months to a year. There is a teacher stationed permanently in the largest county, King. Chronological records are kept on those pupils who receive regular instruction or some definite service. Every known blind person in the county is contacted, and is eligible for service regardless of his financial condition. The home teacher is not a case-worker and does not go into affairs of a private nature, but she tries to obtain some definite face-sheet information, such as date of birth, marital status, members of the family, and how long it has been since a person could read ordinary inkprint.

As has been stated, the home teacher calls on every blind or partially blind person in the county. Several visits are often necessary before an individual becomes definitely interested in the program and decides he would like specific instruction. Often, what may be called regular lessons are not given. The individual learns without being aware that he is doing so. For example, the topic of discussion may be sewing. If the opportunity arises, the teacher might mention that needle threaders certainly are a blessing when there is nobody around to thread a needle. Often the person being contacted has never heard of a needle threader. The teacher may have one, or if not, will bring one the next time she is in the neighborhood, thus making possible another call. Another blind person who used to milk the family cow before losing his eyesight may find that going down to the barn is no trouble at all if he follows the clothesline from the back porch until he gets to the woodshed, and then follows the chicken fence from there. These hints, and many others, are inserted naturally in friendly conversation.

The home teacher approaches the prospective pupil as a friend who is vitally interested in him. She encourages him to talk of his past life, of the kind of work he used to do, of the books he liked to read, of what he liked to do for recreation. From this information she tries to find the thing he would like to do. Often it is learning to do the old things in a new way. It is not so much the learning of new things that a pupil needs. Confidence in himself and his ability to do things for himself are what should be developed in the individual. How many times the home teacher has heard the old saying, "You can't teach an old dog new tricks." Often she has shown the person who said it that his theory was fallacious.

There was a Mrs. P. who lived in a three-room apartment. The first visit the teacher made was most unsatisfactory. Mrs. P. could talk only of her recent loss of sight and what a blow it had been to her. She was irritable and felt abused. Although she was only fifty years old and in good health, she had no interest in learning to do anything for others or for herself. Here was material with which to work, the teacher thought. Two more calls were made with no apparent results. The woman talked ceaselessly of her aches and pains and how poorly she was being treated. At the end of the fourth visit, when the teacher was giving up hope, Mrs. P. said, "You might bring around a braille book and I will take a look at it, but I don't suppose I will like it." A week later when she was shown braille, she found it not half as hard as she had anticipated. What luck! Here was the opening wedge. In subsequent lessons many things were discussed. Mrs. P. was shown that she could do her own cooking, clean her own house and mend the clothes of her family. Her hours of loneliness and self-pity were gone. Now she is smiling and pleasant and can see the funny side of her mistakes. She goes to the Ladies' Aid and for drives with her friends. Lately she has realized that she can enjoy fishing trips with her husband. She thought she was learning to read braille, but this was incidental because through it her readjustment was made.

Mr. L. is sixty-eight, a bachelor living in a hotel. While his

cronies played cards, he sat on the sidelines. He has now mastered the braille alphabet and has marked ordinary playing cards with braille. He finds pleasure in playing rummy with his friends.

Mr. S. was forty-two years old with a wife and two children. He owned a small grocery store and ran it capably. When called upon, he expressed a desire to learn typewriting. The teacher brought her portable typewriter to his home and gave him several lessons. Soon he bought a machine of his own. His progress was rapid and in three months he was able to write a presentable business letter. By learning to typewrite he relieved his wife of the letter writing connected with the business.

There are approximately two thousand blind persons in the state; 59 per cent of these persons have passed their sixtieth birthday. Therefore, many of the pupils are well over sixty. Mr. J. was seventy-five, a retired minister. Although he was totally blind, his health was good but his wife's was not, hence it was necessary to hire a housekeeper. Mr. J. did not wish to learn to read, but he did want to learn to do some of the housework so that they could dispense with the housekeeper which was beyond their budget. He would like to get the kindling and build the fires in the morning. First, however, since Mr. J.'s sense of direction was very poor, it was necessary for him to learn his way about the house. It was mapped out room by room and each piece of furniture noted in his mind. In a few weeks Mr. J. could walk about the house without getting lost. Next, the kitchen stove was explained to him part by part. He could not associate the picture of it through his fingers with the stove he remembered seeing. He had never been allowed to light a match and was afraid to try it. The teacher overcame his fears by doing it herself several times. The rest was easy. Mr. J. realized he was not so badly handicapped after all. He learned to make beds, wash and dry dishes, as well as several other household tasks. Finally, because exercise is essential, he was urged to walk around the block with the aid of his cane. The use of hearing in determining the nearness of objects was

also explained to him. With the help he can give his wife, they no longer need a housekeeper.

Many blind persons are self-conscious about eating among strangers. Mrs. D. refused to go to her luncheon club because meat and salads worried her. It was suggested that probably the person next her at the table would be glad to cut them if she asked. Mrs. D. agreed to try it once and now goes to all the meetings without any qualms.

Many more examples could be cited of persons who have learned to knit dresses, crochet bedspreads, and make rag rugs. These and other types of fancy work have made long winter evenings more pleasant.

Let it not be imagined that the pupils are the only ones who benefit by home teaching. The teacher receives a liberal education from her work. From each person she gains something worthwhile. Often what she learns from one pupil is passed on to another.

The teacher often finds persons who would benefit by the vocational aid and training program, or who can be aided by the prevention of blindness program. Special attention is given to those newly blinded so that their readjustment may be as easy and rapid as possible. There can be no set rules for home teaching. Individuals and situations vary. The teacher attempts to fit herself into the pupil's situation. What one person may learn in three months, another may learn in nine. The length of the lesson cannot be standardized. An explanation of a given subject may be easy for one person, while an entirely different one may be used for another student. The teacher should always be friendly, patient and interested.

Aside from the privilege of teaching the adult blind, there is another phase of the home teacher's work which is both pleasant and interesting—her community contacts. She is called upon to explain the program to clubs, schools and societies. This is a real satisfaction, for it not only helps create interest in home teaching, but it gives the public a better understanding of blind persons and a more normal attitude toward them. For the blind as well as the sighted, the achieve-

ment of a normal, well adjusted happy life is what makes life worth living.

Suggested Readings

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Employment of the Blind

E. A. Baker, O.B.E.

EMPLOYMENT of the blind is a subject about which much has been written and said. In spite of educational publicity, however, there is still a great deal of public misunderstanding. Many who have been interested in work for the blind, and even some of those engaged in it, lack that broad understanding and keen insight which is so necessary for the development of comprehensive and practical services.

Much discussion has taken place about various specific problems in the employment field and often employment statistics are quoted. Beyond giving certain impressions and possibly passing on ideas as to new or practical lines on which further training and employment efforts may be based, a general understanding has not been developed. Unless the foundations of a structure are broad and sound the structure itself cannot hope to be sound and stable. For these and other reasons I propose to approach the whole question of employment of the blind on the broadest possible basis. To do this I feel it is necessary to develop a general picture. Having laid the foundation for a general understanding of this picture, I hope that it may be possible to convey much clearer impressions of training and employment possibilities and achievements than can be done in any other way. First, we should understand who the blind in any country or community are. They are a cross-section of society as a whole. For purposes of consideration we may divide them roughly into two groups.

1. Those who have been without sight since infancy or

who lost it so early in life that they required education in schools or classes for the blind.

2. Those who had normal or at least useful vision until they reached adult life and then lost it at some point between eighteen and one hundred years of age.

When you read statistical references to the number of the blind in a country being one in one thousand of general population it should be realized that this is an all inclusive reference; or you may read a statement that in the Dominion of Canada or some state in the United States, there are eleven thousand blind people. This again is an all inclusive figure with the youngest a few weeks or a few months old and the oldest possibly one hundred and nine or one hundred and ten years old. Someone may ask "how many lose their sight in adult life"? No generally applicable percentage can be given since such figures vary according to the country, climatic conditions, period of settlement of the country, health measures, public education on the care of the eyes, elimination of preventable blindness and many other factors. Speaking generally for the North American Continent, however, it may be safely estimated that at least 70 per cent of the registered blind lost their sight in adult life.

Next, when considering a total registration we must have a definition of blindness. Obviously those who are totally blind will be included, also those who may possess anything from perception of light to the perception of large objects only, and finally for practical and employment reasons, those who are rated as industrially blind because they have not enough sight to do work for which eyesight is essential. This last mentioned group will generally be defined in ophthalmological terms "after correction with glasses, as not possessing more than 6/60 or 20/200 in the better eye as tested by Snellen's Chart." With these there may be included a few cases which may possess eccentric vision with an extremely limited field or pinhole (tunnel) visual acuity somewhat in excess, but owing to the highly restricted field, such are for all practical purposes properly included as industrially blind.

We should understand the age classification of the total group of registered blind as of a given date. When reading this we must, of course, realize that some lost their sight in infancy or early childhood many years ago and are now in the old age group. Others lost their sight recently at any age. Some had lived an active life and had retired from their profession, business, farm or other vocation before sight failed. starting out on promising careers with all the future before Others were in the prime of life, while still others were just them. The following tabulation will give a picture of a total registered group in the Province of Ontario, Canada.

Service register of The Canadian National Institute for the Blind for the Province of Ontario for the year ending March 31st, 1940, shows 3,678 names listed of whom 3,532 were served and 146 not served.

An analysis of the 3,532 cases from the standpoint of age shows the following:

19 years of age and younger		176
20-69 years of age		
Men	1412	
Married women	580	
Single women	303	
	2295	2295
70 years of age and over		1061
		3532

For the purpose of this discussion the blind may be divided into two general groups, the employable and the unemployable. To illustrate, we will use the classification in the foregoing table.

1. The employable age group, that is, twenty to sixty-nine years of age inclusive, 2295.
2. The unemployable age group, that is, under twenty years of age and over seventy years of age, 1237.

While there are exceptions to every rule, being in this instance the employment of some young people under twenty years of age and some older people over seventy, it has generally

been conceded that we will not find many employees outside the above-mentioned employable age group. In fact we are told by some authorities in Great Britain, Europe and other countries that blind persons at fifty years of age are as unproductive for employment purposes as the sighted person of seventy years of age. This, subject to some exceptions, is, I think, a fair estimate when applied in respect to industrial employment or manual trades. On the other hand, some who lost their sight early in life and possess more than average ability are continuing in business after fifty years of age and in a few cases even after seventy, most successfully. This is but an indication of the exceptions to the rule.

I do not propose to discuss here the services which are, can, or should be provided for preschool age, sightless children or the educational facilities necessary. For all this group, however, the training and education in childhood and early youth has a most important bearing on subsequent employment possibilities. To illustrate, if a sightless child under school age is being constantly prohibited from normal activities through parental fear of dangers, impressions and even faults may be engendered that will persist throughout life. Frequently in presence of the child parents discuss his affliction and their misfortune. Imagine the point of view developed under such circumstances, but it is even worse when the disability of such a child is regarded by parents as a reproach and when such a point of view leads to neglect and even positive ill-treatment. A good school for the blind may undo much of this early damage though it is difficult to know or be certain even under the most ideal conditions that consequences will not persist in later life. In some cases such children have not been understood even by school authorities and prospects for their whole afterlife have been impaired.

The school has played a most important role in the life of the young blind. Academic and technical education, cultivation of orderly habits, social amenities and personality, represent but a few of the valuable benefits. To meet the practical requirements of adult life, however, it is necessary for the

school to do much more. The young man must be fitted for a professional, business, industrial or other vocation. The young woman may choose business, industry, a profession or home making. For both, however, it is obvious that vocational guidance during the school period is highly desirable and in many cases most essential. So much can be done by an experienced and wise counselor to gauge the capabilities and the aptitudes of the young man or woman and, with a realization of the problems of life in society, render valuable guidance leading to a practical choice.

The Employable Adult Blind

It is necessary to analyze a given employable age group of the adult blind to determine just how many may be regarded as employable or semi-employable for wage earning, or maintenance purposes, how many are, or are likely to be, self-employed, and how many are unemployable, and those who because of home duties or responsibilities are not available for or seeking wage-earning employment.

Briefly the factors which affect employability are: age, illness and disability in addition to blindness. Within the employable age group any age past forty to forty-five is an important limiting factor when considering admission to industrial or manual employment. At any given time illness will disqualify a fair percentage of otherwise employable adults. Of all the factors affecting the employable age group of the blind, disability in addition to blindness is unquestionably the most important. A study of the causes of blindness for any such group will disclose the fact that over 50 per cent have disabilities in addition to blindness and to an extent that seriously restricts employment or even renders them unemployable. Also in this study it will be noted that for approximately 50 per cent of those who lost their sight in adult life the principal cause was stated to be one of the following: brain tumor or lesion, arthritis, rheumatic fever, arterial or disseminated sclerosis, diabetes and certain kidney conditions. These conditions are

generally responsible for serious disabilities apart from having been the chief factor in causing blindness.

The conclusions which may therefore be reached from the foregoing analysis of a completely registered age group of the blind, from which the employable and the semi-employable have been drawn, apparently are:

1. Of the total registered employable age group of 2295, 883 women represent 38 per cent and 1412 men represent 62 per cent of the total.
2. Of the 883 women, 580 are married or 66 per cent of all women in this group.
3. Since married women with but few exceptions are not available for wage employment, the 580 in this group will not ordinarily appear on employment lists.
4. The single women in this age group number 303 and following a deduction of approximately 50 per cent to cover those with major disabilities in addition to blindness, plus deductions on account of age, responsibility for family care, etc., we do not expect to find more than 20 per cent available for wage employment.
5. Of the 1412 men in this age group we would expect to make the following deductions.
   A. 50 per cent with serious disabilities in addition to blindness.
   B. Men who had lost sight in adult life after acquiring financial security.
   C. Men subject to the effects of premature aging.
   D. Men disabled in war or by industrial or other accidents for which pension or compensation adequate to maintain a reasonable living standard who are not anxious for employment but follow hobby occupations.
   E. Men who follow professions such as musicians, piano tuners, etc., others self-employed as in small businesses, on farms, etc.
   F. Indians on reservations.

G. The shiftless and unstable to the point where it is impossible to maintain employment yielding self-support.

Following these deductions we find the number actively seeking wage employment reduced to approximately 20 per cent of the total, or for the group of males, twenty to sixty-nine years old inclusive, above mentioned, approximately 280.

Let us now examine the actual employment records for blind men and women in the Province of Ontario as of March 31st, 1940.

EMPLOYMENT TABLE

THE CANADIAN NATIONAL INSTITUTE FOR THE BLIND
PROVINCE OF ONTARIO

	C.N.I.B. staff, industry, placement	Home industry, income $9.00 per week and up	Sighted industry	Total
Married women	15	—	—	15
Single women	62	—	1	63
Men	235	6	32	273
	312	6	33	351

Note: The married women group includes widows.

Employment records in the foregoing table indicate a fairly close approximation to the number of blind persons who are estimated as employable and seeking salary or wage employment.

In this connection we should refer to some exceptions to the employable age group rule. In the registered group for Ontario the records, in the age group seventy years and over, show five employed with The Canadian National Institute for the Blind, one employed in home industry with the Institute and one under twenty years of age employed with the Institute.

EMPLOYMENT OPPORTUNITIES

While there are some occupations found particularly suitable for blind people and common to two or more countries, there are many which are peculiar to one country or even one

district. To illustrate, we find that willow and allied basketry weaving has been a trade for blind workers for a long period not only on the North American continent but fairly generally throughout the world. Throughout the English speaking world and Europe, piano tuning and the musical profession are recognized occupations. On the other hand broom making is peculiarly a trade followed on the North American continent, brush making in England and Europe, miners clog making and repairing in England, wine-barrel cupperage in France and massage in Japan.

Up to early in the present century schools for the blind on this continent and in Europe were in the habit of training their graduates to follow the musical or piano tuning professions and certain individual trades such as basketry, broom, brush or mattress making, etc. Organizations serving employable groups of the adult blind on this continent concentrated principally on supervised industry making brooms, mops, mattresses and basketry, while in England and Europe brushes, mattresses and similar articles were produced. Particularly during the past three decades increasing attention has been paid first, to the development of new trades and occupations, and second, to the development of home teaching for those who lose their sight in adult life and who may be found to be fully employable, semi-employable or capable only of following some hobby occupation as a matter of interest. Especially during the past twenty-five years some new lines have been added in the North American Continent such as power-machine garment sewing for blind women, spring-mattress and brush making for men, rubber-mat making, rug weaving, etc. Considerable progress has been made in certain types of pottery making. In Great Britain the manufacture of furniture and bed springs has been adapted.

Possibly one of the most important developments within the past twenty-five years has been the realization that the solution for many of the employment problems of the capable sightless could be found in modern industry. To an ever in-

creasing extent industry has been engaged in sub-dividing and simplifying bench assembly and machine processes. The sightless manual worker is least handicapped when working within a narrow range at a bench or machine. It has been proved beyond any question of doubt that when located on a carefully selected and feasible operation the capable blind worker can and does produce on a basis equivalent to that of his sighted fellow worker. Therefore, he can fully earn similar wages.

The idea of blind persons working in general industry was conceived many years ago, but so long as the all-round mechanic apprenticed to his trade and expected to do all required operations was demanded by the industrial employer, the blind enjoyed few practical opportunities. During the last war, however, this whole question was brought very much to the fore as a result of efforts to place war-blinded adults. Special investigations were carried out in the United States, Canada, Great Britain, and Germany in particular, and more recently in Russia. While some success was achieved, the movement gained little headway because of a lack of appreciation of the necessity for careful selection of applicants for given jobs, and a lack of careful aftercare supervision to make certain that after being placed the blind were able to continue successfully in their jobs or were adjusted to changing processes, etc. However, the idea persisted with several attempts at various points in the United States and Canada during the succeeding years. During the past twelve years more progress has been made though opportunities were restricted by the depression which seriously affected industry throughout this continent. The depression while causing much hardship has also brought benefit. When those interested in finding employment for the blind in industry could make little headway in slack times, attention was more definitely turned to the development of concession stands selling tobacco, candy bars, etc., in offices and public buildings, and canteens serving industries. It was during this depression period that legislation in the United States gave the blind the right to operate conces-

sion stands in Federal government buildings. Many such stands operated by blind people had already been located in municipal buildings, in private office buildings and industrial plants. A similar development has taken place throughout Canada. The placement work of The Canadian National Institute for the Blind began to make real progress following the acquisition of Mr. J. F. Clunk as chief placement officer. We have progressed to the point where the employment rolls of the Institute today show more blind people employed on placement stands and in general industry than the total number employed on the staff and in the workshops of our organization. Hence, we may well recognize placement work as an extremely important development affecting the employable blind. This is especially applicable to those who lose their sight in adult life and already have had business experience. Even though they may be forty to sixty years of age they may undertake the operation of a dry stand or canteen, making use of their previous experience with eminently successful results. Previously this group constituted somewhat of a problem when organizations were limited to industrial and manual occupations which were not suitable for those not manually capable, and especially those who had already passed the forty-five to fifty years of age mark.

It is obviously impossible in the space of a limited discussion to cover the great variety of occupations that have recently been investigated or are at present subjects for experimentation. Speaking generally, however, it does seem obvious that to serve blind persons adequately in training and employment, an organization must have a comprehensive program. No two blind persons have exactly the same type or degree of aptitude of any particular kind. We recognize the impossibility of achieving the ideal. For practical and economic reasons we must develop certain groupings. Having done this we must provide a sufficient variety of occupations so that we may not be criticized for trying to fit a definitely square peg in a just as definitely round hole.

The Semi-Employable Adult Blind

The semi-employable blind are sorted out of the general group of the registered blind because they have some practical degree of working or productive capacity above that of the unemployable, but cannot measure up to full-time or economic production standards. For these, some part-time job may be found within their capacity, for others training through home teaching leading to one of the many types of home industry may be the answer. This group will be in a fairly constant state of flux. Some with improving health, better adjustment of outlook, or increasing experience may be able to measure up and fit into the employable group. Others due to increasing age or handicaps will pass into the unemployable group. From time to time this group may be augmented by those who can no longer continue to maintain the higher productive standards required for those in the full-time employment field. The semi-employable blind in the age group twenty to sixty-nine inclusive will in general be found to equal the total of those who constitute the wage earning group plus the self-employed.

The Unemployable Adult Blind

This group will for all practical purposes be made up of all who are seventy years of age and over plus approximately 20 per cent of a total registration of those twenty to sixty-nine inclusive. In the latter section unemployability is due primarily to age, additional handicaps, invalidism, etc. For these, ameliorative services plus, where possible, home teaching and some hobby occupation, will constitute the principal consideration and help that can be given apart from state pensions.

Conclusion

A comprehensive and adequate employment service for the employable blind can be best ensured under the following conditions:

1. A comprehensive service organization accepting complete responsibility for services in a given area, or in

such given area, existing organizations working under a definite co-ordination arrangement.

2. A complete registration of the blind.
3. A definitely cultivated public understanding and interest.
4. Reasonably adequate financial support whether from state or private sources, or a combination.
5. A keenly interested, active and efficient administration of the organization or of the co-ordinating administration and member agencies.
6. A steady finger on the pulse of public opinion and social evolution to make certain that developments in services for the blind do not lag behind the changing picture of society, industry and business.

I realize that it is difficult to paint a clear picture of so broad a field without unduly complicating it with detail. On the other hand, detail is necessary to ensure the clearest possible understanding. I have always insisted that employment is one of the most important and necessary services which can be rendered in the field of work for the blind. I believe we all recognize that there can be no justification for extending employment service only to a favoured few and leaving to a process of vegetation in idleness the many who may be scattered throughout the area. Without a general registration we cannot be sure that we have sufficiently thoroughly combed our field for employable prospects needing service. Some of the applicants will from the first obviously be rated as employable. Others may require home teaching and a number of service contacts over a period of time during which their outlook is being adjusted and their confidence restored before they can be sorted into the group to which they belong, employable, semi-employable or unemployable.

Employment with self-supporting earnings or for the semi-employable, some employment with earnings or even occupational therapy work for the unemployable, is much more important even than it would be for similar groups of people

with sight. The restrictions imposed by blindness are the more irksome if unrelieved by something which the hands can do and the mind can be interested in or concentrated upon. Pension or allowance may provide a degree of security so far as food, lodging and clothing are concerned but no such pension or allowance can ever take the place of practical employment. Special workshops for the blind may be regarded as essential for those who are mechanically inclined in areas where general industry does not provide reasonable or sufficient opportunities, and for those who are not sufficiently stable temperamentally to successfully hold a position elsewhere without excessive supervision. Employment in general industry has very special advantages in times of normal or good employment conditions. There are of course disadvantages connected with seasonal or periodical plant shut-downs. Placement in concession stands supported by proper supervision and aftercare is undoubtedly a most important addition to the general employment picture. To ensure justification and stability, placement in stands with aftercare supervision should be on a self-supporting basis. For placement in general industry with supervision and aftercare by a qualified and efficient staff the wage returns to the group of the blind served should be ten times the service cost. Workshops for the blind with all charges incident to the operation included should in no case show a subsidy cost in excess of one-third of the wages paid to blind employees. Many operate on a much lower subsidy basis, while some break even in normal times.

Even in this enlightened age blindness is still considered by many as a somewhat mysterious condition. Too often the blind person is overrated, but more often underrated. To those who know the blind this will be well understood; to those who do not, may I say that the sightless man or woman who driven by ambition or the desire for self-supporting employment, or the desire for occupation to offset the ills of idleness, displays a degree of courage and fortitude that should be encouraged. Lest worries of the capable unemployed sightless be borne with unseeming fortitude, every effort should be made to

understand the problem and to seek in every place and quarter the solution waiting to be found.

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Placement Procedure

Coburn L. Broun

THE intelligent economic rehabilitation of the blind is of comparatively recent beginning. It is perhaps not too much to say that it is still in its infancy. That is, while a tremendous advance has been made, there is room for much greater progress in the future. It is not an easy matter to convince the man who relies on his eyes to guide him in his work and on the street, that a man who is lacking one of the five senses still has an economic value. Neither is it easy to demonstrate this fact to the man who has recently lost his sight. Yet the work for the visually handicapped rests upon this conviction, and must continue to do so if a stable basis of procedure is to be established for the future. Quite by accident the writer, in reading a novel not long ago, came upon the following statement by a blind man who had received his training in the famous St. Dunstan's in England:—

> The first thing they teach you at St. Dunstan's is to cut out all the pity-the-poor-blind stuff. A man newly blinded is a mass of self-commiseration. . . . Well, they drill that out of him; they bully it out of him. He can't resent it, coming from other blind men. (That is why the head of St. Dunstan's has to be a blind man himself.) After that, he is taught to live just like other people. We blind used to be herded together in an asylum; now, as soon as we can fend for ourselves, we are turned loose and allowed to find our way about. It's wonderful adventure.

Although there is not a St. Dunstan's in this country, nevertheless this quotation represents, with fair accuracy, the result that must be achieved by those who seek to bring economic independence to the blind. In addition, the thought must be constantly borne in mind that the words, economic independ-

ence, are used in their strictest sense. The paramount need of the visually handicapped is to be shown that they are still useful, still have an economic value. There is nothing more damaging to self-respect than the feeling of complete uselessness. Nor can this feeling be successfully combatted by the continued doing of useless things. Making knick-knacks that no one wants and that are only bought in response to an appeal to the sympathies should have no place in intelligent rehabilitation work. Such performances contribute nothing to the world's production and are of little value beyond that of occupational therapy. The placement of the blind, as considered here, means providing the opportunity for the blind to adjust themselves to the seeing world, and thereby gain a livelihood. What it distinctly does not mean is that their entrance into a life of commercial activity shall throw any of the machinery out of gear, or that they shall receive undue consideration either from their employers or from their fellow workers. What should be offered the blind is the chance of being absorbed into the economic world in such a way that actual commercial value will result. The employer's first thought should be that the employee is a good workman, rather than that he is unable to see.

There are two important points to be discussed. We shall begin by dealing with industrial opportunities for the blind and methods of finding them. It is desirable, in the interests of progress, that the matter be considered in its economic aspect, rather than as an emotional appeal to human sympathy. These two points of view represent the difference between a temporary stop-gap, and a steady building of security on a sound economic basis for the visually handicapped. The first viewpoint is the only one to be considered here.

As work with the blind is administered today, the connecting link between the employee and the employer is the placement agent. It is the opinion of this writer that the agent should be blind, having lost his sight in adult life, after having gained a practical knowledge of business through experience. He should have at least a speaking acquaintance with financial,

professional and political procedure. Through this knowledge and experience he can better approach a prospective employer on placement possibilities. In approaching an employer to seek an opportunity for the handicapped worker, he will speak the same language as the man addressed, and be able to present his argument in that language. He has both sides of the question in his mind, and can thus present the matter intelligently and effectively.

Although the agent is thus equipped, the approach to the employer is not to be made without careful preparation. A list of the industries in the locality where work is sought should be obtained from the local Board of Trade or Chamber of Commerce. The next step is to investigate the possibilities of these industries. The agent must visit the listed plants to survey their production program and determine which, if any, of the jobs can be done by a blind man. Then he must sell the idea of such employment to the active head of the establishment. Just here he must call on all the diplomacy and sincerity at his command, particularly if the man to be approached has never employed any blind workers, and assumes that it would be quite impractical to do so. If he be wise, the agent will obtain all possible information concerning this man before he calls on him, inform himself regarding his tastes, amusements, avocations, find out how he spends his time when away from business. It is important, in addition, to know whether the employer has any feeling of civic responsibility, and what is his general attitude toward his employees. Does he need to be convinced of the social and economic soundness of the idea of blind workers, and if so, what key can be found as to the best avenue of approach? No available source of information as to the qualities and character of the man to be interviewed should be neglected. Even when all possible inquiries have been made and the agent feels himself in a position to seek an audience, he must be constantly on the alert for side lights from the man himself. He must quickly rephrase any argument that he perceives to be out of harmony with his listener's attitude.

If, as generally is the case, the man in authority assumes that sight is essential for the performance of all work under his control, he must be shown that blind persons can be employed with advantage at repetitive, non-hazardous work. It should be pointed out that blindness removes one possible claim to compensation, and that blind workers are not so great an insurance risk because they are less subject to distraction from their work than the sighted. This is proved by the record of accidents to the blind in industry. Further, if it becomes necessary to remove a blind worker for any cause whatever, this will be attended to by the agent in order to shield the employer from the embarrassment attending the discharge of a handicapped worker. The cost of labor turnover for blind workers is virtually nothing because they realize their limited opportunities for employment, and seldom, if ever shop around for increased wages. In other words, they are not "floaters." All these points are helpful in establishing a basis on which an agreement may be reached.

One frequent difficulty the agent must be prepared and equipped to meet is the question of workmen's compensation. Because of misunderstanding of its application, compensation insurance is one of the first objections raised against the employment of the blind by a prospective employer. The agent therefore must be familiar with the objectives and the operation of the compensation law in the state in which he is working in order to interpret it intelligently to the prospective employer.

Happily, there are employers who have a considerable social and economic understanding, even though they may never have given employment to any visually handicapped worker. They also take a broad view of the part played by productive industry in the world's development. When it is brought to their attention, such men are able to see that it wrongs the community as well as the individual to allow a physically handicapped worker to become a public charge. Every nonproductive unit not only fails to add to the wealth and security of the community and country, but must be paid

for by other workers in extra taxes and increased effort to maintain the balance of production. Every individual, whether physically handicapped or normal, is entitled to an opportunity to contribute, according to his capacity, to the social and industrial welfare of the world. This conviction should be so firmly rooted in the mind of the placement agent that he communicates it to the prospective employer, and thus influences industry to feel its force and significance.

When the agent has located a job suitable for a blind applicant, he makes a special covenant with the employer. This is not an agreement to employ any *special* blind person, but rather some one selected by the agent who in turn assumes the responsibility of middleman. The worker, as well as the employer, must understand that he is subject to careful inspection by the agent at frequent intervals. If the person first selected to fill the position proves unsatisfactory in his work, he will be removed and another substituted. Since the agreement was made for an unnamed visually handicapped worker, the substitution is the more easily accomplished.

The work of supervision is one of the most important duties of the agent. It is essential to the success of the employment program. It stimulates efficiency in the individual worker and establishes the agent's desire to co-operate with the employer. It assures a basis for educating the public to the commercial value of the blind worker and is a selling point to other employers. Further, careful supervision causes the employee to recognize and accept his responsibility toward his fellow sightless worker, and to realize that his individual efficiency may well be a measure of progress in securing work for others similarly handicapped.

The foregoing summary is intended to give a general idea of some of the requirements of a placement agent. It need hardly be stated that eternal vigilance must be his watchword. He must be constantly on the alert, not only for new plants in the territory where he has workers to be placed, but for new processes and inventions that may provide fresh opportunities and openings. Whenever he hears of a new machine

or a new manufacturing process, his first query should be, "What is there in this that a blind man can do?" His continued success depends on reaching ever-widening circles, and he cannot afford to sit upon the bank and watch the ripples about one pebble before throwing another.

In the office the agent is confronted by a number of different problems. Roughly speaking, the work here corresponds to that of any employment office, with one important difference. The usual agency depends upon written or telephoned inquiries for workers—stenographers, secretaries, telephone operators, or whatever class of employees it may consider its specialty. It would obviously be unusual for any employer to telephone a special request for a blind worker, no matter how broadminded he may be. The agent's work in the office, therefore, is largely devoted to those who seek employment.

The first step for the applicant is to fill out a prescribed form, including such questions as a personnel manager would ask of anyone seeking a position. It will cover among other items, education, training, work done before blindness, references, and the record of previous employment. To this is added a report of an eye physician, giving diagnosis, degree of vision and prognosis, interpreted by an eye classification analyst. The references and employment record must be investigated, not alone to aid in deciding what work the applicant is best fitted for, but to gain an insight into his personality, intelligence, disposition, ability to meet and conquer difficulties, power of co-ordinating hands and mind, industry and integrity. The investigation should include an examination of home conditions, vocational training, work history and community standing. This record should be available at all times, not only for the information it contains, but also for the purpose of adding other information concerning developments of the case while it is active.

The placement agent must treat all such data individually. He cannot group together those who wish to study law, or those who wish to work in a factory. Each applicant has a

unique being of his own. The particular aptitude of each worker must be studied in order to determine his ability to sustain the demands likely to be made upon him, both physically and temperamentally. The man's personality, integrity, experience and versatility must be considered. It must be judged as far as possible whether he will respond to opportunity and is capable of sufficient growth to advance in his work, or whether he is merely a steady operative, possessed of no particular desire to go further than a secured livelihood.

The foregoing information can come only from the careful study of the individual and attention to seemingly insignificant details. To obtain it requires infinite patience and a keen understanding of both the worker and the work. Nothing concrete should be done in the way of actual placement until the agent has satisfied himself concerning the exact sort of worker with whom he is dealing.

Only when he has progressed so far may the agent allow himself to think of specific work. He will study the positions available and, being familiar with their specifications, select the worker best fitted to meet their requirements. He will not send a nervous, highly sensitive typist to an employer of similar temperament. Nor will he send a slow moving operator to a man who attaches more value to speed than to accuracy. Even though sedulous care is exercised in the selection of workers they may not always prove to be satisfactory. There are unforeseen situations and demands which frequently arise, making it necessary to substitute one worker for another.

It sometimes happens that a position becomes available when there is no applicant on the list with the necessary experience to fill it. The question then becomes one of deciding who is capable of absorbing the necessary training for the place. The agent may have to try several candidates before the right one is found for the work. His success depends upon patient endeavor, coupled with a constant keeping in touch with changing requirements and opportunities, and an ever-functioning vigilance in discovering new fields of endeavor

for the blind. At the present time, there is recorded from 250 to 275 different kinds of employment in which blind workers are successfully competing with sighted workers and new avenues are constantly opening. Each new invention brings possible new fields, while those already recognized and used may reveal new departments where sight is not essential for the successful performance of the work.

As it is hardly possible in a reasonable measure of space to go exhaustively into the various occupations pursued by the blind, only two examples of work successfully carried on are chosen here. The first is the operation of vending stands, in which the visually handicapped have been particularly fortunate. The method of installing such concessions is as follows:

Through the efforts of the placement agent the location is secured, the fixtures placed, and the operator selected. The sighted worker in charge of installation and training lists for the convenience of the operator, the articles to be included in the original stock. He then takes the operator with him to the wholesaler or jobber for the selection of the stock. During the interview the wholesaler or jobber is fully informed on the following points:

1. How the stand is to be conducted.
2. The responsibility of the operator for the indebtedness, if credit is granted.
3. How such indebtedness is to be liquidated.
4. What methods must be pursued by the wholesaler or jobber should there be a default in a single payment.

With the merchandise selected and delivered, the worker checks it with the invoice, and at the same time instructs the operator in this department of the work. He then directs and assists the operator in placing the merchandise in the cases.

The operator is trained until he is thoroughly familiar with every item of merchandise in his stock and its location. He is taught to buy and sell, and how to greet and serve his customers. He learns how to display his merchandise to advantage, how to determine what part of the cash taken in is his

own and what part is to be reserved, not only for payments for merchandise but for increases in stock. He is instructed how to maintain his personal appearance and how to keep his stock and fixtures always in a presentable condition. In addition and above all, he is taught to make change quickly and to operate his stand just a little more efficiently than if he were sighted. Supervisory visits are made by the agent at frequent intervals. During such visits every phase of the work is checked and a detailed report thereof filed in the home office. Such stands have been and are being maintained in public and private buildings, bus terminals, factories, hospitals and other locations. Hospitals offer excellent opportunities for concessions, and the stands already established therein have proved of practical value to the institutions. This fact is substantiated by written statements of officials of several hospitals in which the concessions are located.

Another occupation in which the blind have been successful is that of operating telephone switchboards. An interesting report of this work from a blind operator who was successfully employed in this capacity for about twenty-five years is quoted below:

> I feel that for some totally blind persons (providing a satisfactory mechanical system is available) and for some partially-sighted persons who are able to distinguish the visible signals, there is a real opportunity in this work. The specific needs of the position to be filled, however, form the great question. If the operator relies entirely on reaching the persons he desires through calling on the extensions, it is quite possible for a blind person or one with partial vision to operate quite a large and busy board. . . .
>
> The easiest way to summarize the work of the telephone operator is to divide it under the heads of "Incoming" and "Outgoing" calls. A braille or New York Point slate or a braillewriter should always be at hand, also a typewriter, if possible. A good plan is to have a sheet of paper ready in the braille writer or slate and have it dated. Memoranda may then be made of anything connected with the work, whether it has to do with incoming or outgoing calls, and the necessary dictation can be done later.
>
> If the person desired on the incoming call is at his extension,

the matter is simple. If he is not there, he must be located, or a message taken for him. If the person called is out and no one acts for him, it is necessary to satisfy the caller's needs, or to take a message. The message may be delivered direct from the board when the person returns, or a note may be left on his desk. This is often the case, and the operator must find ways of arranging for it. It will depend on the setup of the office just how this can be accomplished. . . .

The important thing in handling the outgoing calls is the careful recording of toll calls. This may be done by keeping the charges in braille and then typing them in any form suitable to the office, so that the telephone bills may be checked, and if necessary, charges made to the persons calling, or to some department of the business. . . . There are many little adjustments which the operator can readily work out for himself, but a thorough understanding of telephone practice is really essential.

In addition to this, a representative of the Telephone Company has stated that he believes that a carefully selected blind person could learn to operate a PBX (Private Branch Exchange) board with the special attachment in about a week. The company will supply an instructor, but it is suggested that the agency working with the blind should at the same time supply someone who is experienced in working with the blind to assist in the training. In this way training representatives of both the local telephone company and the supervising organization for the blind, working together, will be able to provide all the needed training to prepare a blind person to operate a board. The Telephone Company stipulates, however, that it remains the province of the rehabilitation agency to locate the employment opportunity.

These are only two examples of many interesting occupations being carried on successfully by the blind. Actual experience has demonstrated that they are successful in agricultural, clerical, retail and wholesale fields; in factories, in insurance work, in managerial, political and public service offices, and in the professions. The placement agent must naturally be thoroughly informed on all such work, not only

that he may be able to do everything possible for his clients, but that both the blind and the public in general may be continually educated toward the idea of helpful co-operation. It is essential, too, that the fact be recognized that the opportunities offered do not come under the head of charity, nor even of sympathy; but are more essentially matters of practical productive employment and general economic welfare.

Speaking as one who can consider the employment of the blind from the standpoint of both the employee and employer, it is my conviction that only by pursuing the foregoing representations will the placement of the blind in industry be economically justified to the employing public as well as to the workers. Placement of the blind, therefore, should be recognized in time as a not altogether negligible part of the industrial world, and once so recognized, should increase in importance and scope until it becomes an unquestioned factor in productive activity and in economic life in general. When this result has been attained, placement work for the blind will rest upon a practical basis of systematized information. It will then receive its true rating as a unit of work from employers and industrialists.

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The Blind of Limited Employability

PETER J. SALMON

JUST how many blind persons are employable has never been determined. Of the total number of blind persons in the United States (perhaps 200,000), the gainfully employable are variously estimated from 20 to 30 per cent.

In the group of blind persons of limited employability, we are excluding first those who can or should be placed in industry, business, or in the professions. These may be 10 per cent of the total employable blind population and are the pioneers. As they blaze the way and push forward in competitive employment our more limited blind may follow, to some extent. Not all will follow for very good reasons.

This discussion refers to blind persons from eighteen to eighty years of age. It is estimated that 50 per cent of the blind population is over sixty years of age, a most important factor to keep in mind. Like seeing people, the blind have varying aptitudes, abilities, and capacities for work. In addition to blindness, many are burdened with other handicaps, due to physical or mental disabilities, and to limited experience or training. It is the combination of multiple handicaps, and not necessarily blindness alone, that is responsible for the larger number of blind people who are unable to make the grade in the competitive field even under the most favorable circumstances. Instead, they must be trained and employed under special working conditions and with proper safeguards provided for their health and well-being. A few may be retrained to take up their places in competitive positions. This goal should ever be kept in mind. The majority, however, will require special arrangements made for them. This task of providing work for the majority of employable blind per-

sons is not spectacular, not one permitting quick results, but a job, nevertheless, that needs to be done; and one to which no end of intelligence, efficiency, and imagination should be brought. Above all else required is a general understanding of the problem and of the human element involved.

Another factor reacting upon employability is the present limitation of the programs of organized work for the blind. Agencies for the blind must engage increasingly in furthering employment for blind people. The agency to a large extent must take the responsibility of overcoming the tremendous reluctance of employers to consider well-qualified blind employees for vacancies.

Despite these and other complications, there is one very real asset in the problem. It is the desire on the part of the blind to do useful work—even those who cannot perform work for which they can be remunerated, earnestly desire work for the sake of occupation. A large number of blind persons of limited employability who are unable to compete in outside occupations, but who are able to leave their homes, are given training and employment in sheltered workshops. They are provided with employment to the extent of their abilities under the special conditions offered in these sheltered workshops. This group is probably the best known to the public.

Those blind persons who are capable of placement in outside occupations are considered elsewhere in this book. Those we are concerned with may be classified into the following employment groups within the general designation of limited employability.

1. Home Work
2. Pastime Occupation
3. Sheltered Employment

Home Work

Home work among the blind is essential for a number of reasons. It may be best for the newly blinded person to at-

tempt some form of work at home where familiar surroundings require one less adjustment. The blind person may live too far away to commute to any center for the blind, or may be unable to leave home for other reasons, perhaps because of some other physical disability, or because it is more suitable for some other member of the family to earn the livelihood. In the case of blind women it is often necessary for them to do part or all of the housework, and then spend what time is left on any available home work.

Home work itself is divided into two main categories, industrial and pastime. Industrial home work is that in which the worker engages primarily for the monetary consideration involved, and pastime work that in which the worker engages primarily for the sake of occupying idle moments and stimulating his interest.

There are various types of home work. In some cases the state commission or the private agency for the blind provides instruction to home workers, taking their finished product on consignment, and markets it through retail sales, after which the blind worker is reimbursed. In some instances the blind home worker has the raw materials furnished, but often as not, he has to pay for these at the time of purchase.

In a few states blind persons receive vocational training at a center and then return to their homes to carry on either on their own initiative or with the assistance of the commission or the private agency. Among the occupations thus engaged in may be mentioned broom making, mattress making, basketry, rug weaving, sewing, leatherwork, novelties, hemming of towels, making of toys, and the manufacture of a scattered variety of individual articles too numerous to catalog here.

In instances where a commission or agency for the blind takes responsibility for the sale of the product of the home worker there is an inspection service through which only the better made articles are accepted for sale.

Not all agencies for the blind have a home work service. It is felt, however, that there is a real need for development in this field, and that perhaps a nation-wide survey of present

programs with recommendations for further advancement is highly desirable. It is believed by many that standardization of methods, of the products produced, and of marketing would be most helpful. One prominent worker for the blind who has been in the home work field for many years suggests that it would be possible to go a long way toward solving the home work problem by standardizing a few articles which could be well made, and marketing these on a nation-wide basis; on the other hand there are those who feel that church sales, the sales of women's clubs, and similar efforts used so advantageously in the past are the real avenues for further development.

There remains the fact that there is still a considerable group of blind persons who for one reason or another must remain at home, but who desire and need some type of work, either for support, wholly or in part, or for the beneficial results provided by such occupation.

Pastime Occupations

The need for pastime occupations for the blind can readily be appreciated when it is recalled that many blind persons sometimes are greatly limited in their ability to be rehabilitated to a normal way of life by age or other additional disability. Yet among this group are to be found some who after a period of pastime occupation may be susceptible of training for more active forms of employment. The pastime program if well conceived has two main objectives: First, to provide some useful type of light occupation to stimulate the work habit, and second, to provide a proving ground for some persons who may at first be reluctant to try more pretentious employment, but who may subsequently prove to be employable in the more active work done by the blind.

Pastime occupations are often thought of as "occupational therapy." The programs envisaged differ considerably among the agencies providing this type of service. The main objective, however, of all seems to be to provide an activity for

blind persons who would otherwise be most unhappy in total idleness.

It is of interest to note that some of the larger agencies for the blind, who have maintained programs only for the more employable blind persons in their communities, in recent years have decided that the needs of the blind required the inauguration of pastime service programs. In some agencies this has been done on a part-time basis, with each group of pastime clients coming in one or two days a week; in others, regular hours each day have been set aside for the pastime worker. And again, in some of the agencies the pastime worker is included among the so-called "industrial" workers in the sheltered workshop. It is generally believed, however, that it is better wherever possible to make a distinct division between the pastime worker and the regular workshop worker, and also to keep separate records including the cost of financing these separate services. It is pointed out that by so doing it is possible to keep the different program for each group more clearly in mind, and the effect on the morale of each of the groups is enhanced by such separation.

A wide range of articles is made by the pastime workers although they are similar to those made by the home worker. Marketing is done in much the same way as with home work, that is, chiefly through retail sales.

The pastime program is of necessity carried on in centers in communities where there are sufficient numbers of blind persons to make such a program feasible. It is on the increase as a service to the blind, and has reached a point where as with home work it would be well to evaluate the present set-up and future needs of this service to the blind.

Sheltered Employment

There are more than a hundred sheltered workshops for the blind in the United States and Canada. They vary greatly in size and in the extent of their programs. Most of them employ blind persons of limited ability. Others are quite selective employing only those who meet certain qualifications for par-

ticular jobs. Probably not more than seventy-five of these shops are sheltered workshops in the light of the definition stated below.

> A sheltered workshop is a charitable institution or activity of a charitable institution, not being conducted for profit, but being conducted for the purpose of providing remunerative employment or rehabilitating activity for physically, mentally or socially handicapped workers.

Little had been done for the blind in the way of providing employment until the latter part of the nineteenth century, when the first attempts of organized work for the training and employment of the blind were started. Generally speaking these attempts were looked upon as visionary. For the most part they were either fostered by the schools for the blind, or by graduates of these schools. And as might be expected they were concerned for the most part with the problem of finding employment for former pupils, rather than for the blind who lost their sight in later years. Among the first to recognize the problem of the adult blind were the so-called industrial homes for the blind, which maintained as the name implies, a home as well as a workshop, and in addition provided work opportunities for blind persons who did not live in the home but came to the shops each day.

However, no real impetus in this movement for employment of the blind was evident until after the beginning of the present century, when through the growth of the commissions for the blind, and the increasing number of private agencies a more decisive approach to this problem was made. It was about this time also that those working with the blind began to make progress in classifying the blind as to their employment potentialities, and made attempts to provide separate types of employment to fit individual needs.

It would be ideal if the sheltered workshop could act as a training center where blind persons could be sent for a period of vocational education, and then placed in some job in normal business or industry for which their special training and

other qualifications had fitted them. This, however, is not attainable due to the fact that, as indicated earlier, some blind persons are capable of working only under special conditions. It is, however, the responsibility of the sheltered workshop to make constant effort to obtain outside placement even if the shop thereby loses its best workers.

The sheltered workshop provides useful employment to blind persons. It is recognized that useful employment is an important factor in the lives of the seeing. With respect to the blind then, employment takes on an additional significance due to the very limitations imposed by blindness. The purpose of providing regular work for the blind goes far beyond the financial consideration involved although this is the important part of any worth-while program. Employment affords to the blind a means through which abilities stunned by blindness may be restored and the blind person thus may participate more normally in society. It also affords a means through which the blind person may earn a partial or whole livelihood. Those to be employed in sheltered workshops should include the following:

1. Only those who are blind according to the definition recommended by the American Foundation for the Blind, the National Society for the Prevention of Blindness and the Social Security Board, which is as follows:

   > Visual acuity not to exceed 20/200 in the better eye with correcting lenses; or visual acuity greater than 20/200 but with a limitation in the fields of vision such that the widest diameter of the visual field subtends an angle no greater than 20 degrees.

2. Among the group who are blind within the above definitions, there should be further selection on the basis of mental and physical fitness and training for employment. Age also is a consideration. Those between eighteen and fifty-four years should usually be considered.

3. Only those seeing persons who are required for supervisory and other positions requiring sight for performance.

Blind persons in sheltered workshops are generally considered to be clients rather than employees since an employee is one who performs a service intended to bring a profit to his employer. The blind client of the sheltered workshop, on the other hand, is generally given employment by a nonprofit agency somewhat in the line of industrial therapy. If he can be graduated into business or industry, he is classed as an employee in the original sense of the word. A blind person of limited employability is generally unable to enter into a contractual agreement with respect to remuneration for services rendered except in a sheltered workshop.

There should be an adequate training or apprentice period established. The sheltered workshop should avoid the mistake of simply taking blind persons with little or no proper training into the shop and putting them to work. During the training period the blind person should have ample opportunity for being tried out on different operations so that it may be determined which is most suitable for him. Arrangements should be made for a training allowance which will support, in part at least, the blind person himself. This allowance should be established in terms of the average potential earnings of the piece of work assigned to the trainee. Supplementation of earnings, if not available through the blind person's own resources, should be expected from the public assistance agencies. Close co-operation between the public and private agencies is clearly necessary.

After the training period, a blind person should be placed in the job he can do best without displacing other workers. It is therefore desirable that there is a diversity of industries available in the workshop. The blind man should be compensated adequately for his service. Where there is a union piece rate available, the rate paid to the blind person should be commensurate with this. In the absence of a union scale, rates

paid by reputable manufacturers of like products in the vicinity of the sheltered workshop should be used as the basis for formulating rates of pay. If the wages thus determined are not sufficient for the living expenses of the blind person, any further supplementation is the responsibility of the public agency rather than of the workshop.

The number of hours and the working conditions in the shop should conform to the best standards prevailing elsewhere in similar or comparable industries. Special emphasis and consideration should be given to safety precautions with particular attention to:

1. Guarding of hazardous machinery and adequate safeguards against occupational diseases.
2. Regular fire drills.
3. Adequate insurance protection.

Inspection of insurance carriers as well as of representatives of various government departments should be welcome. All the axioms of private industry such as cleanliness and business-like operation of the shop are also essential in the sheltered workshops.

The selection of the type of product to be manufactured is a matter for individual research and determination and is a question which deserves most careful consideration. Products should be made for an existing market or for one which can be readily developed. If the article made is one for which there is no market, then the blind person's employment is obviously not useful. In such a case the shop defeats its own purpose. As in competitive industry, specifications should be set up and adhered to in order to maintain a standard of manufacture. The product should be so priced as to be competitive in the open market. A definite policy against underselling should be maintained at all times. Methods of marketing the product are matters for determination by each agency. There is no mystery about selling, but certain basic principles must be followed. If this is done, brooms, mops, planes or automobiles may be sold with the use of these same principles.

Individual methods of sales practice and procedure may differ, but not the principles. Agencies for the blind will do well to rely upon sound merchandising methods rather than on the sloppy appeal of blindness. "Make a good product, forget it was made by the blind—then sell it."

It has usually been found that standardization on the basis of a comparatively few articles is better than trying to have too great a variety. Included in workshop industries at the present are brooms, mops, mattresses, weaving, basketry, toys, mat making, chair seating, leatherwork, etc. Sewing is also among the activities of the sheltered workshop with the production of a variety of articles such as smocks, aprons, pillowcases, house dresses, hemming of towels, etc.

The smaller workshops usually sell their products at retail, through special sales, their own salesrooms, or through a sales agency. Both blind and sighted retail sales persons are used. The larger shops, in particular, sell to quantity consumers such as factories, hospitals, institutions, railroad and steamship companies. Others sell to the wholesale market, jobbers, chain stores, department stores.

Opinions differ as to the amount of deficit which is justifiable in the operation of a workshop for the blind. Some students of the subject feel that workshops for the blind, if efficiently run, need have no deficit at all. Some managers of well-run workshops feel that a deficit equal to 50 per cent of the wages paid is justifiable. This whole matter should be studied carefully in the light of recent developments.

It is suggested that one answer to this important problem of deficit might be to have a goal beyond which expenses would not be permitted. Just where the "peg" should be put is the question. There seems to be a growing feeling that a good job is done by an agency for the blind conducting a sheltered workshop if, after all proper expenses have been accounted for, it has not cost the agency more than fifty cents to pay each blind person a dollar.

One of the most helpful developments in the sheltered workshop field was the enactment by Congress in June, 1937,

of the Wagner-O'Day Act. This act provides that brooms, mops and other suitable products made by the blind may be purchased by departments of the Federal government at a fair market price. The fair market price is determined by a committee on blind-made products composed of representatives of the various buying offices of the Federal government and a private citizen conversant with the problems incident to the employment of the blind. The Committee also makes rules and regulations.

Still another function of the Committee is the appointment of a non-profit organization for the blind to act as the allocating agency. The Committee has selected National Industries for the Blind to act in this capacity. National Industries for the Blind was created by the American Foundation for the Blind in co-operation with the sheltered workshops for the blind, in order to meet this need, and to co-operate with the workshops in connection with the manufacture and sale of their products.

The first orders under this law were allocated by National Industries for the Blind in January 1939, and during the remainder of that calendar year and 1940, orders worth more than two million dollars had been allocated to a total of forty-four shops in twenty-six states. Some twenty-one items were placed on the government schedule of blind-made products. While the legislation was originally sought for supplying brooms and mops to the Federal government, the bill was broadened to include other products. The largest item on the list by far for 1939 was pillowcases, which provided much additional employment for blind women.

Beginning early in 1940, in a small way, National Industries for the Blind started a development of the open market on behalf of the workshops. National organizations buying for their own use are being solicited for business first, with other important developments to follow later.

National Industries for the Blind hopes to become of increasing value to the shops as the years go by in aiding them with their many problems. During the first year, much was

done, not only to help stabilize the market for their product, but also to obtain their raw materials at better prices. A splendid spirit of co-operation is manifested, and an interchange of ideas and workshop data has begun with assured benefits to the entire group. At a general meeting to which all sheltered workshops for the blind were invited, an advisory committee of fourteen shops representing the various sections of the United States was appointed to co-operate with National Industries for the Blind.

In National Industries for the Blind the sheltered workshops for the blind now have a central organization devoted to their needs. Both the government and the open market developments are being closely watched. An impetus has been given to the sheltered workshop movement which is sure to produce beneficial results.

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Dog Guides for the Blind

MARY DRANGA CAMPBELL

A GREAT deal has been done for blind persons down through the years in establishing schools, providing higher education, employment, placement and recreational programs—but never has it been possible to give those without sight physical freedom and independence until "the dog guide movement came into being."

The idea of training dogs as guides for the blind was proposed as long ago as 1819 in Austria. Nothing came of it, however, until 1915 when the German government opened a school at Oldenburg and began training dogs to guide the increasing number of soldiers and sailors who were losing their sight while in service in the World War. This work proved so successful that the German government trained several thousand dogs for the use of its newly blinded veterans and, after the war, extended this service to its civilian blind population.

This work is still going on in Germany, although, for various reasons, the public attitude towards it there is not the same as it is in this country. Adapting the techniques of this work so that it would be useful under American conditions and for American blind people was due to the initiative of Mrs. Harrison Eustis, who is founder and president of the Seeing Eye. In 1924, Mrs. Eustis, while living in Switzerland, began experimental breeding work with the German shepherd dog at her experimental station, Fortunate Fields. Mrs. Eustis had for years been impressed with the unusual intelligence and fidelity of these dogs. She believed that, in breeding them for show purposes, these essential qualities were being lost. She, therefore, undertook to produce a strain of dogs

which would not only be structurally beautiful but which would have the highest possible intelligence.

The German shepherd dog is a working dog. For centuries it had been guarding sheep in Central Europe. Mrs. Eustis, with Elliott S. Humphrey, the American geneticist, began to apply the intelligence, which was being bred back into her dogs, toward solving some of the problems of man. At Fortunate Fields, dogs were developed to patrol the Swiss national borders, for the Italian Metropolitan police, for liaison service in the Swiss army, for training and finding missing persons.

The Seeing Eye

Mrs. Eustis' interest in the work led her to visit Potsdam, in Germany, where the German war-blinded soldiers were learning to use their dog guides, and later when the need arose, Mr. Humphrey went to Germany to study their methods of instruction. Mrs. Eustis, on her return to Switzerland, described what she saw in an article which was published in America in the *Saturday Evening Post* in 1927. That article created a great deal of interest. When read to a blind young southerner, Morris S. Frank, he at once wrote to Mrs. Eustis to ask not only how he could obtain a dog guide but how a similar service could be started in America for blind persons. She invited him to come to Switzerland and there learn to use a dog she would have specially educated for him. The education of Buddy, the pioneer, initiated the service for the blind at Fortunate Fields, which was to result in the establishment of three schools for the education of dogs as guides for the blind. One is in England, another in Italy and the third is The Seeing Eye in America. Quite recently, in 1936, the Scandinavian countries of Denmark, Norway and Sweden organized a co-operative committee for the education of dog guides for the blind with headquarters in Oslo, Norway.

After his period of instruction with Buddy, Mr. Frank returned to prove the work to his skeptical country. Together with his dog he traveled thousands of miles in the eastern part

of the United States, deliberately seeking bad intersections, narrow curbless streets, fast and congested traffic. He applied the principles mastered abroad and found they worked as well under American traffic conditions as they had in Europe. When he cabled Mrs. Eustis that the experiment was a proved success, she agreed to rearrange her work abroad and to return to America to help inaugurate the dog guide movement in the United States.

The Seeing Eye was established in January 1929, in Nashville, Tennessee, and in 1932 reincorporated under the welfare laws of the state of New Jersey, as a national, non-profit, philanthropic organization to scientifically educate dogs to guide blind people in America.

A few years after the founding of the school, Seeing Eye dogs, all over the country, were guiding men and women—factory workers, lawyers, newsstand operators, farmers, newspaper men, college students, executives—all blind and all aided or given greater physical and economic independence through The Seeing Eye.

In 1929 there were very few who believed that dogs, however well educated, could take a blind person safely through all conditions of American traffic. But the small group who had spent years in Europe studying and developing working dogs were convinced that The Seeing Eye could in times liberate hundreds of men and women who could not accomplish what they wanted to do because they did not have physical independence. Without the background of experience of this group a school with The Seeing Eye's standards would have been impossible. To that experience they added diligence and wisdom, patience and painstaking effort, understanding and the scientific approach.

Although it takes but one month to teach a blind person to use a dog, and but three months to teach a dog, it requires years to develop a qualified instructor. Seeing Eye instructors are sighted men. They must serve an apprenticeship, must study animal psychology and learn to understand the handicaps and abilities of the blind. Their hours are long and ardu-

ous. The importance of the instructor is fundamental, and to have qualified instructors The Seeing Eye must educate them for the work. In no other way are they obtainable.

The selection of men for instructor-apprentices is a difficult task for they must have all the personal qualifications that are requisite for success in any occupation an individual might choose. In addition thereto, service to mankind rather than aspiration to a great financial success must be uppermost in their minds.

How the Dog Works

The method by which the dog and man work together is simple. The dog guide does not take its master to his destination without being told where to go. It is not generally understood that blind people can develop an adequate mental picture of their own communities. All they need is a means by which they may be guided around this picture. In a strange city they ask directions as anyone else would. It is simple to remember blocks and landmarks and to remember also when to go right or left.

It takes a month of study and practice at Morristown for a blind person to learn to use his guide. He must be taught how to direct the dog and interpret the signals from the leather harness handle which is held lightly in the left hand. He also learns how to care for the dog.

The master directs his dog by oral commands of "right," "left," or "forward." The signals which come from the dog through the harness handle tell him everything that is close to him and is liable to interfere with his safe progress. This almost perfect communication between the two permits the dog and man to walk at a pace which is more rapid than that of the average pedestrian. Upon arriving at street crossings the dog guides its master to the edge of the curb and stops. He finds the edge immediately with his foot or cane and then gives the command for the direction in which he wishes to go.

The dog can be depended upon to do its part. Before the blind student comes to the school the dog has spent three

months being taught its lessons in guiding by a sighted instructor. The final rigid blindfold tests prove the dog's ability to take full responsibility of a person who cannot see. For these tests, the dog's original instructor is temporarily blinded with a "sleep shade" and the dog is tested under the most difficult conditions at the busiest of intersections and in the heaviest pedestrian and street traffic. Not until the final test is passed is the dog certified as ready for a sightless master.

Eligibility

Not every blind person can use a dog guide. Some are too young, many too old. Some do not like dogs. But conservative estimates indicate that there are several thousand persons who could benefit through the services of a dog guide and who will eventually want one. All of them do not want dogs now. But the number of blind people who realize the tremendous benefit a Seeing Eye dog might be to them is increasing steadily year by year and instructors are being developed to keep pace with this increase in national demand.

The Seeing Eye selects its students with great care. While the exacting qualifications must, in all cases, be passed upon by The Seeing Eye, the intimate knowledge which local agencies ordinarily have of blind people in their communities makes their co-operation in determining these qualifications exceedingly valuable.

The eligibility of applicants is judged from the standpoint of vision, health, character, and need.

An applicant's health is exceedingly important, for obviously any handicap in addition to blindness which impairs the student so that he cannot walk rapidly, or any health disorder adversely affecting his vitality, would prevent him from using a dog. For this reason it has been necessary to set a theoretical age limit of forty-five years for women and fifty-five years for men, and it has been found advisable not to accept applicants who are under the age of sixteen. The need of the applicant is measured by the qualifications he offers for complete adjustment. Intelligence, adaptability, and an impelling desire

for freedom, economic independence and self-respect are important qualifying factors, and, in determining these, the local association may be of great service.

Applicants other than those who are totally blind are given special study. Where the student has traveling vision, he will not depend upon his dog to guide him and therefore is apt not to succeed. For applicants with light perception or limited object perception methods have been worked out whereby the disadvantages of such perception in following the dog may be overcome. The Seeing Eye, also, has been successful in adjusting individuals almost immediately after they become blind.

Local agencies or individuals who wish to help a blind person in whom they are interested, may do so by calling him to the attention of The Seeing Eye so that this organization may conduct its investigation into his eligibility, encourage the individual, and help him to realize his opportunity for freedom.

Financial Policy

The Seeing Eye is trying to make blind people independent. A policy which recognizes their capacity for financial independence is a fundamental step in enabling them to achieve that objective. It is based on the assumption that blind people with spirit, like spirited sighted people, rebel against support through charity. They want to pay their own way in the world—they do not want The Seeing Eye or anyone else to do this for them.

Each student, therefore, who comes to The Seeing Eye is asked to pay, or to assume an obligation to pay $150.00 for his "tuition," board, lodging, and his fully educated dog and its equipment. Like the tuition at private colleges, this is far below actual cost, but it represents to the blind applicant a fair charge asked of everyone and no student is burdened with a feeling of discrimination in his favor. He thus maintains his self-respect and integrity in his community.

If the student is unable to fulfill this obligation at the time of training, small payments may be arranged, over a period

of time, commensurate with his ability to pay. Even though his initial payment is as little as one dollar, each succeeding payment is tangible evidence of his willingness to assume the responsibilities of independence. As one blind person put it, it is not a payment for a dog but a payment for self-respect.

This procedure has been arranged so that it will not be necessary for the students to accept this money as a gift or a loan as this is contrary to the policy of The Seeing Eye. No applicant, if otherwise eligible, is denied consideration because of lack of funds. If traveling expenses should prove a problem to an individual, this subject may be taken up with The Seeing Eye for special consideration.

The Future

From the moment a blind person leaves Morristown with his dog, The Seeing Eye assumes an additional obligation toward that person's future independence. The graduate can look forward to eight years of working companionship with his dog. When the life span of the animal has ended, he returns to The Seeing Eye to learn to use a second dog and perhaps a third or fourth. Some dogs have already died, and their masters have returned at once to the school for retraining. Every effort is made to accept these retrainees as soon as possible after the loss of their dog guide.

In order that newly blinded persons may not lose their morale or become despondent but continue to maintain themselves as active, normal members of their own communities, they are accepted as soon as it has been established that nothing can be done to restore or improve vision.

It is not necessary to learn to become blind—one naturally, after loss of sight, must adjust oneself to changed conditions but there is no world of blind people to which one is to be transported. A student, blind about six months, arrived at The Seeing Eye with his morale at very low ebb. It was soon discovered that this was due to his having been told when he lost his sight "You will not be able to do anything for two or three years until you learn to become blind." Think of the

effect of this type of psychology! Is it not better to encourage the newly blinded individual to function as a seeing person and to keep his former contacts and position in his community?

The above student upon completing his adjustment with his dog guide stated "My self-confidence has been restored and I am going home not only with the knowledge but with the determination to keep my own place in my community and take care of my wife and myself."

The dog guide is a potent factor in restoring self-confidence and self-esteem in the newly blinded person, and often in enabling him to continue in the same type of work in which he was engaged before, or in an allied occupation.

Nation-Wide Service

Although for efficiency of operation The Seeing Eye maintains its headquarters at Morristown, New Jersey, the school serves blind men and women in all parts of the country, drawing its students without discrimination from wherever there is need. Thus one finds Seeing Eye dogs guiding blind people under all conditions, in little towns and big cities, on the West Coast, in the Colorado Rockies, on the great plains of Texas, in the deep South of Mississippi and Florida, in New York and New England, in Maryland and Michigan, everywhere in America, in fact, where there are blind people with ambition to succeed.

The Seeing Eye has considered the desirability of establishing branches in other centers but a thorough study of the question shows that it would not at present be economical to do so. The cost of duplicating buildings and personnel would be unnecessarily excessive because there is no real need for such branches since the present physical equipment is sufficient to meet the national demands for dog guides for some time to come. Under no circumstances would The Seeing Eye establish a branch which was less effectively staffed than headquarters.

There is no question but that a great many blind persons

can benefit by a dog guide but the publicity given is very misleading as to the number who actually need or want dog guides. A careful study of the question was made in one of the largest states in this country. It showed that approximately 5 per cent of the blind population could use dogs but this did not mean that the same percentage would want them. Fortunately for those who want dog guides, The Seeing Eye has been able to meet the increasing national demands. The dog guide is not an article to be "sold"—it is there for those who are ready to take advantage of the freedom and independence it represents. No attempt is made to "sell" the idea to any blind person, for a satisfactory adjustment cannot be accomplished unless there is a firm conviction on the part of the applicant that the service can be of benefit to the individual.

More Than Just a Guide

The efficiency and ability of Seeing Eye dogs to act as eyes is now an accepted fact but they are usually thought of solely as a convenient and efficient means of taking blind people where they want to go. This is important, for the greatest difficulty the loss of sight imposes on the individual is his inability to move about freely and independently. The removal of this difficulty through the medium of the dog guide brings about an immediate uplift in morale; the mentality is stimulated; and where lost, self-confidence and self-esteem are restored. These changes are indicated in a new outlook on life; latent talents are released which are reflected in greater efficiency in work and in family and community relationships. For the unemployed, this freedom of movement widens the field of employment opportunities, the exercise involved results in improved health, and the status of the individual in the family group often changes as the blind member's economic ability is demonstrated by new employment or by increased earnings. Another effect of this independence of movement is the freedom given the members of the family who no longer have to hold themselves in readiness for guiding.

A recent survey showed that 95 per cent of nearly six hun-

dred of the Seeing Eye graduates were either financially independent, gainfully employed, housewives or students attending universities or special schools. This study did not include part time jobs or take into consideration those who were studying for employment or awaiting placement.

The Seeing Eye does not carry on placement work as such but co-operates with existing agencies, for employment is a natural sequence to securing a dog guide.

These factors in the rehabilitation of the individual are far reaching and bring about changes in some Seeing Eye graduates which are almost incredible. This growth has been described in hundreds of letters from graduates. One young man who was completely rehabilitated and is now carrying on in the same type of employment in which he was engaged before loss of sight, writes:

> Mira and I are celebrating our second anniversary. Yes sir! two years of constant association as a self-supporting unit, working harmoniously together under all sorts of traffic conditions, performing social and industrial obligations and plenty of public appearances on the radio, concert stage, and lecture platforms. I cannot find the proper words to describe my feeling for Mira. All I can say is, she is a pal, a perfect guide and an inspiration.

Suggested Readings

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Some Problems in Statistics of Blindness

EVELYN C. MCKAY

THERE are no reliable statistics in the United States as to the extent of blindness or the characteristics of the blind population. That may sound incredible, but it is, unfortunately, true. Let us look at some of the reasons why this situation exists. One's thoughts turn first to the U. S. Bureau of Census as a source for statistics of the blind. The Census Bureau for many decades included a census of the blind in its regular decennial census of population. It developed, however, that no matter how great the care taken, the census reports never produced the results desired. The difficulty of applying uniformly a definition of blindness[1] in the hands of lay census enumerators, the unwillingness of some families to admit that there were blind persons in their households, and, probably, most important of all, the comparative infrequency of blindness in the general population, combined to make the reporting seriously incomplete. For instance, if the enumerator inquires as to the presence of a blind person in the household at several hundred homes, and always receives the answer "No," he is likely to forget sometimes to ask the question. There is no means of knowing how incomplete the

[1] There are various definitions of blindness, ranging all the way from a total absence of the ability to perceive the difference between light and dark, to that degree of sight which is generally known as "useful vision." The most generally accepted definition, however, is as follows: "Visual acuity not exceeding 20/200 in the better eye with properly fitted correcting lenses." In non-technical terms, a person who has 20/200 visual acuity can see at 20 feet only those objects or characters which a person with normal vision can see at 200 feet. It is usually considered as being roughly equivalent to the ability to read ordinary print.

census figures have really been,[2] and similarly there is no way of knowing whether those blind persons who were reported in the census are representative of the total blind population as a whole. It may be, for instance, that young and active blind persons were more completely reported than the aged and infirm, or that blind children of school age came to the enumerator's attention more readily than blind infants. Therefore, although in each census up to and including 1930, the U. S. Bureau of Census published tabulations of characteristics of the blind population, too much importance should not be attached to these figures. The census authorities have themselves recognized these weaknesses, and as a result, no census of the blind was made in the population census of 1940. This is not a matter for regret, but rather for congratulation. It is probably better to have no figures at all, and therefore an incentive to develop reliable statistical procedures, than to have some statistics which look all right, but, upon examination, are found to be unreliable.

Another important source of statistics of the blind is found in the reports compiled by the Social Security Board. There are, in the states administering aid to the blind under the Social Security Act, more than 46,000 blind persons, and, under the direction of the Social Security Board, each state has compiled social data regarding the recipients of aid to the needy blind. This is probably the largest body of information about the blind, uniformly collected and compiled, which has ever existed in this country and is undoubtedly of great value in studying certain problems of blindness. Nevertheless, it has certain characteristics which prevent it from being representative of the blind population as a whole. In the first

[2] No one knows how many blind people there are in the United States, but on the basis of intensive studies made in various representative areas, it is estimated that the average incidence of blindness is probably about 15 per 10,000 of general population and may be as high as 20 per 10,000 of general population. There is no way of estimating the variations of incidence from state to state which might be caused by differences in medical care, in nutrition, in the age groups of the total population, or by a dozen other factors which are not at present subject to measurement.

place, it includes only recipients of aid to the needy blind, and therefore blind persons who are self-supporting or are supported by their families are omitted from the figures. Moreover, definitions of need vary from state to state, as do requirements of citizenship and residence. The most important factor, however, is probably that of age. Minimum age limits also differ from state to state, and in some states all persons under sixteen are ineligible, while in others the lower age limit is eighteen or even twenty-one years of age. With regard to the upper age limit, similar differences are found. In certain states, for instance, Ohio and Massachusetts, blind persons over sixty-five years of age are automatically referred to old age assistance. This means that they are excluded from the tabulation of recipients of aid to the blind, whereas in other states, aged blind persons are included in these figures. That is a particularly important factor because the incidence of blindness is very much greater among those of advancing years, due to the fact that certain diseases (such as cataract and glaucoma) are associated with advancing age. It is estimated that 50 per cent of blind persons are past sixty years of age and the proportion may be even higher. This means that the carrying of blind persons over sixty-five on old age assistance very greatly influences the figures on recipients of aid to the blind.

Another factor which prevents using the Social Security Board's statistics as representative of the total blind population is the fact that in some states the programs of aid to the blind were well under way before the Social Data card was introduced. In some cases, it was not practicable for county workers, already overburdened, to go back and collect social data on cases which had already been investigated, and therefore the use of the Social Data card in certain states has been confined to new cases taken under care in the year in question.

The Social Security Board is perfectly aware of the effect of these factors upon the statistics it is collecting, and makes no claim that the figures so derived are representative of the total blind population as a whole. The danger is, however,

that the lay public, not understanding the problems involved, may assume that the figures thus published are more universal and representative than they really are.

Another possible source of statistics of blindness is found in the annual reports of certain state agencies for the blind. Some of these agencies have been in operation for twenty or thirty years, and have built up large registers for the blind. Some of them make annual or biennial analyses of the data concerning blind persons so registered for publication in their annual reports. Again, it must be said that these figures have some value, but upon examination we find that they also fall short of the standard of reliability we are seeking. There is no way of checking the completeness of such registers or of discovering what proportion of cases has been overlooked. As an illustration, we may mention one state, rather small in area and compact in population, in which the work for the blind had been carried on for some years and was well organized. The executive of that state agency felt that his register was probably about 80 per cent accurate, but as an experiment, undertook an intensive census of the blind in certain selected areas within his state. Special methods were used to secure the reporting of every blind person within these areas, and when that had been completed, some sampling was done to check the completeness of reporting. As a result it was found that, counting registered blind persons who had died or moved away, and newly reported cases not hitherto known to the agency, the original register had been only about 56 per cent complete and accurate, and yet this was one of the states in which a serious effort had been made to provide for complete and permanent registration of the blind and in which the conditions were as favorable as anywhere in the country.

In this connection we may quote the experience of the Ministry of Health in England under which the Government's program for the blind is set up. After the passage of the Blind Persons Act in 1920, one of the first steps to be taken was to establish a register of the blind. In 1921, 34,894 blind persons were reported. The total registration showed

an increase in each successive year until in 1936 (the last year for which figures are available) the registration had reached the total of 67,534, an increase of 93 per cent over the original figure. It is generally recognized that this apparent increase is not due to an increase in the proportion of blindness, although that may have some slight influence over the situation, but is rather due to the fact that even after fifteen years, there were still blind persons who had not come to the attention of the authorities.[3]

England has, however, one great advantage over this country in the registration of the blind in that, because of the small area and dense population, the authorities are able to obtain an ophthalmological examination for every blind person before he is admitted to the register. So far that has not proved possible in this country. Recipients of aid to the blind undergo an ophthalmological examination, but in general no funds are available to provide uniform and competent eye examinations for those blind persons who do not apply for public assistance. Since blindness does not necessarily mean total absence of light perception but includes degrees of visual handicap up to the border-line of useful vision, it is generally agreed that only an ophthalmologist is competent to measure accurately the degree of vision remaining. Therefore, most of the state registers include the names of persons reported as blind, whose degree of blindness has never been determined by a physician, and the proportion of such cases in any register depends largely upon the liberality of policy established by the agency in question.

Another difficulty is that each state, in compiling data from its register, uses its own classification for age grouping, degree of blindness, etc., and therefore figures are not comparable between states.

After this thoroughly discouraging discussion of the inadequacies of existing data regarding blindness and the blind, we may well ask, "Well, what does it matter? What use could

[3] It is to be noted that the British definition of blindness is somewhat more restricted than the definition used in the United States.

we make of such figures if they were available? Why should we expend the necessary time and effort to improve statistics?"

In 1935, when the Social Security Act first went into effect, the first question asked in many states was, "If we set up a program of aid to the needy blind, how many blind persons will apply for assistance, how many will be able to qualify, and what will it cost us?" Those states which had programs of relief for the needy blind already in effect had some idea of the extent of the problem, although, if they contemplated changes in their programs to conform to the requirements of the Federal Act, they could only estimate the effect of those changes upon their total caseload. But other states which had not up to that time made any provision for financial aid to the blind, had no data on which to base their estimates, and in more than one case it developed that the funds appropriated in accordance with these estimates proved entirely inadequate to meet the need because of the unexpectedly large caseload. That emergency is pretty well over now, since all but seven of the states are functioning under the Social Security Act, but while it lasted it demonstrated one important area in which better statistics of blindness were needed.

Another very practical consideration lies in the education of the young blind. As you probably know, most blind children are sent to residential schools for education through elementary and high school. For many years after these schools were founded, they encountered great difficulty in locating the blind children who should have been sent to them, because there was no organized method of finding and reporting such children. With the gradual development of better means of communication and transportation, more and more children were brought into the schools at an early age, and this, together with the increasing population of the country, produced an increase in the population of the schools for the blind.

About 1907 began the active campaign for the prevention of blindness in newborn children (ophthalmia neonatorum),

and as these campaigns through legislation and public education became effective, the number of children blind from this particular cause was considerably reduced. This is one of the few points on which we have something approaching reliable figures. In 1907 the proportion of new pupils entering schools for the blind who were blind from ophthalmia neonatorum was about 28 per cent. In 1937, the figure had decreased to 7.8 per cent. While these figures are susceptible to some criticism because of the possible unreliability of diagnoses in certain cases and particularly in the early years of the reporting, they are nevertheless reasonably reliable. Similar improvement in the control of other communicable diseases causing blindness contributed to the reduction of blindness among young children. The recent campaign for the control of venereal disease will also have the same effect since it is believed that a considerable proportion of congenital blindness is due to prenatal infection from syphilis.

For a long time, the reduction of the incidence of blindness among children from these improved medical procedures was more than offset by the factors of increase mentioned above, namely, the general increase in population and the better distribution of information regarding educational facilities for such children. But within the past ten years another factor has entered in—the falling birth rate. While we have been aware that the birth rate has been declining gradually for some years, we have in general failed to appreciate the rapidity with which this decline has taken place since 1930. When the results of the 1940 census are published, we shall probably be considerably surprised to discover the extent of the decrease.

In Rhode Island, for instance, where a state population census was made in 1935, the results show that in the age group under seven the birth rate is very seriously below that which is necessary to reproduce the existing population, and it is steadily going lower. This decrease in the proportion of children in the population is already being felt in our public schools, and to a lesser degree in our schools for the blind.

Combined with the decrease in the incidence of blindness among children, it is likely to produce within a few years a very considerable reduction in the number of blind children to be educated. What does this mean to our residential schools? What does it mean, for instance, to their programs for new buildings, and increased facilities? Have they now reached their maximum size? What will happen to the smaller schools? Will they soon have so few pupils that they will not be able to afford the overhead involved in providing comprehensive and varied curricula? Will there possibly be a necessity for combining some of the existing schools, or closing certain schools and sending the remaining blind children from that state to some other for their education? These are questions which vitally concern, not only the educators of the blind, but the taxpayers and those responsible for planning public programs.

For another instance of the need for statistics, let us turn to the question of employment of the blind. It is generally agreed that a blind person who is mentally and physically normal can be satisfactorily employed in a variety of occupations, provided he would be employable if he could see. But, when we consider that, according to our best estimates, at least 50 per cent of the blind are past sixty years of age, and probably would not be in active employment if they had their sight, and probably another 10 per cent are under twenty and should be engaged in preparation for their life work, we realize that not more than 40 per cent of the blind are in age groups for which employment would be a normal answer. Of that 40 per cent, a certain number will be ill, emotionally unadjusted, or otherwise unfit for employment, and a certain number will be housewives whose home responsibilities would normally prevent them from entering the labor market. We therefore find that not more than 25 per cent of the blind, and possibly only 15 per cent, are employable or would be employable if they could see. This puts an entirely different face on the problem of employment and makes it seem much less formidable.

The largest group to be considered is that of the aged blind.

This is the group which is probably the least completely reported in the various census figures and registrations, partly because, being aged and sometimes in frail health, their infirmities are the infirmities of age rather than of blindness, and they are likely to be overlooked in consideration of the problems of the blind. Nevertheless, this is one of the groups which need service most if they are not to be relegated to the lot of the "chimney-corner blind" whose lives are limited, isolated, and condemned to inactivity. According to figures from Pennsylvania, which are probably as complete as any available, 74 per cent of the blind persons receiving the state pension for the blind are past 65 years of age. What consideration should be given to them in planning a program for the total blind population?

If the value of adequate statistics of blindness and the blind has been sufficiently demonstrated, and if we recognize that such statistics do not now exist in this country, what can we do about it? The answer appears to be, not in any immediate and episodic effort to solve the problem through a special census of blind population, but rather in a long-time program, soundly conceived and carried out with due observation of statistical procedures.

The Committee on Statistics of the Blind, jointly sponsored by the National Society for the Prevention of Blindness and the American Foundation for the Blind, has been working since 1930 to develop basic forms, classifications, and definitions, by which the gathering and compilation of such figures may be improved. It has been a matter of gratification to the Committee that the Social Security Board, upon assuming its responsibilities, adopted certain of the forms and procedures developed by the Committee and by so doing has established them as basic fundamentals in its statistical program.

The steps which might be taken to provide ultimately for adequate and reliable statistics of blindness are suggested as follows:

1. That each state should take responsibility for statistics of the blind population within its borders. This responsi-

bility should be centralized in the state commission for the blind, the division for the blind in the state department of welfare, or some similar agency.

2. That some type of Federal or national supervision should be established to insure uniformity of procedure and adequacy of reporting. Those states which first attain the required standard of adequacy might be set up as a registration area in the same way as was done in the development of a registration of births and deaths some years ago. Additional states on attaining the required standard could be included in the registration area.

3. That each state should carry through to completion the work already begun in assembling statistics of recipients of aid to the blind. The procedure recommended by the Social Security Board in this connection would serve as a sound basis for future developments, and we would have in the first place a better picture of that portion of our blind population which is in financial need.

4. That, as circumstances permit, each state should provide for eye examinations of all blind persons on its register, to insure uniformity of definition of blindness. There are other excellent reasons for requiring an eye examination for every blind person taken under care, one of these being that the eye examination report is a basic tool in the social treatment of blindness, and that it is almost impossible to give appropriate and intelligent service to a blind individual without knowing something of the history of his eye condition. Thus a valuable by-product of the eye examination is the definition of the blind group, as distinguished from those who suffer merely from defective vision. So far as I know, only one state, New Hampshire, has up to this time put into effect the policy of procuring an eye examination report for every blind person registered.

5. When procedures and definitions are well established and data on cases already known have been secured, each state should make an effort to locate as far as possible all the additional blind persons within its borders who have not

hitherto come to the attention of the state agency. There are various special methods which may be employed in such an intensive study, and undoubtedly improved techniques will be devised when serious attention is given to this phase of the problem.

6. Better techniques must be devised for keeping a register up to date. Even though a state register is 100 per cent complete and accurate today, we are sure to find that by tomorrow some blind person has died, moved out of the state, or regained his vision, or that additional persons have been newly blinded. Methods of meeting this problem adequately have yet to be developed, but probably much could be done through enlisting the interest of leading citizens in each community and giving them a personal responsibility for reporting newly blinded persons and thereby putting them in touch with the services the state provides for them.

These problems merit, not for the sake of statistics as statistics, but because adequate statistics are fundamental to an adequate and intelligent program for the welfare of the blind. With public funds limited and private funds increasingly more difficult to obtain, it behooves us all to study our state and local programs for the blind with a view to determining which services should be expanded, which curtailed, and which needs of the blind are as yet unmet. We must know more about the people we are trying to serve—who they are, where they are, what they need, and how their needs should be met—before we can plan intelligently or administer adequately a comprehensive program of services to the blind.

Suggested Readings

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Aid to the Blind under the Social Security Act

JANE M. HOEY

THE Social Security Act, as passed by Congress in 1935 and substantially amended in 1939, provides for the development of social protection on a broad front. Federal grants-in-aid to the states have made possible the extension of numerous health and welfare services and the establishment of unemployment compensation, now in operation throughout the country. In addition, a Federal old-age insurance plan was inaugurated to provide monthly cash benefits for retired workers sixty-five years of age and over. The amendments of 1939 extended this insurance protection to the families of insured workers. Under this new system, now known as old-age and survivors' insurance, monthly benefits became payable January 1, 1940.

The blind are potential beneficiaries under many of these related programs. One, aid to the blind, is designed specifically to provide assistance for those who cannot see and are in need. But beyond this, other protections offered by the Act reach many people who are blind or may become so. The two social insurance programs provide an income for industrial and commercial workers and their families when unemployment, old-age or death cuts off earnings. Public health, vocational rehabilitation, old-age assistance and aid to dependent children furnish various services in which the blind, along with their fellow citizens, have a share.

SOCIAL INSURANCE PROTECTIONS

In 1940, more than 28,500,000 persons were covered by the fifty-one state and territorial unemployment compensa-

tion laws, and thus were building up credits toward cash benefits in case of future unemployment. The provisions as to benefits, contributions, and so on are determined by each state law, within the general framework outlined in the Federal Act. In most states benefits may be paid for approximately fourteen or sixteen weeks. The amount is usually half the worker's regular pay up to about $15 a week. In order to be eligible for benefits, the unemployed person must have worked in insured occupations and have enough credits under the state law; he must also be able and willing to accept suitable employment. While out of work, he reports regularly to the local public employment office; this state-operated service handles both job finding and job insurance. Benefits are paid from state unemployment compensation funds, to which employers contribute and, in a few states, employees also. During the year 1940, benefits totalling about $520,000,000 were paid to approximately 5½ million persons.

Under old-age and survivors insurance, a Federally administered program, about 52,000,000 wage earners had social security accounts at the end of 1940. In order to be eligible for monthly benefits for himself or his family, the worker must have had at least a certain minimum amount of employment in covered occupations, must have reached sixty-five and no longer be working in a job covered by this system. A worker who meets these requirements receives monthly benefits for the rest of his life. In addition, similar benefits are payable to his wife if or when she is sixty-five, or to his children until they are sixteen or eighteen if still in school. If an insured worker dies at any age, monthly benefits are payable to his family—to his children until they reach sixteen or eighteen if still in school, to his widow provided she has such children in her care, or if she is sixty-five; if there is neither a widow nor child, to the worker's dependent parents at age sixty-five.

As there is no complete current census of all blind persons in the United States, there is no way at this time of discovering how many blind people are included under these two insurance programs. The number who are in covered jobs in com-

merce and industry is probably limited. The self-employed, those in nonprofit institutions or agencies, and agricultural and domestic workers, have not yet been brought into either system. But this protection is not limited to the worker himself; blind persons in families of insured workers would also share in it.

Health and Welfare Services

Other sections of the Social Security Act also provide services for the whole community, including the blind. State health departments, through funds provided by the United States Public Health Service and the United States Children's Bureau, have been able to extend such services as health education and disease prevention and control, and special care for mothers and babies and for crippled children. If a state so desires, a "blind" child, or one whose physical handicap may result in this condition, may be considered "crippled" and given necessary medical care through Federal funds. Child welfare services for children requiring case work service or care have been strengthened, particularly in rural areas and localities with special need. More adequate and extensive vocational rehabilitation for the physically handicapped, capable of re-employment in competitive industry, has resulted from additional Federal funds granted to state education departments. These health and welfare services provided under Titles V and VI of the Act are available in all states, the District of Columbia, Hawaii, Alaska, and Puerto Rico, except that vocational rehabilitation is not in operation in Alaska.

Aid for the Needy

While the two insurance programs enable the great majority of wage earners to maintain themselves and their families without help, there still remain large numbers of individuals and families whose resources are insufficient to supply the necessities of life. These include those who cannot work because of blindness or old age, and children who have been deprived of parental support. These three groups usually

require long-time and expensive care, difficult for families and communities to provide without help. By authorizing Federal grants to states, the Social Security Act afforded the opportunity for communities to give more adequate care to these groups.

At the close of 1940, forty-eight states, two territories, and the District of Columbia had approved plans for aid to the aged and over 2,000,000 persons were receiving this form of assistance. The average grant per individual was $20.14 per month. Many blind persons are included in this group. Eligible persons sixty-five years or over and blind may be provided for under either program but no one may receive both forms of aid simultaneously. Forty-two states and one territory had approved plans for aid to dependent children and approximately 850,000 children were receiving this assistance. The average grant was $32.52 per family. Some blind persons have eligible dependent children, because of either the death, physical incapacity, or continued absence from home of one parent.

Status of Aid to the Blind

Forty-two states and one territory were giving aid to the blind under the Act at the end of 1940 and about 50,000 persons were receiving this assistance. During the last fiscal year, 1939-40, there has been no considerable change in the ratio of blind recipients to the general population, 46 per 100,000 in June 1939 and 48 in June 1940. However, this 1940 ratio ranged from 10 in the lowest state to 144 in the highest. The distribution of blind recipients added to the benefit rolls during 1938-39 appears to be almost equally divided between urban and rural areas; 51 per cent living in cities, 49 per cent in rural areas. However, in five predominately agricultural states about 70 per cent of those accepted were living in rural areas. Obligations for aid from Federal, state, and local funds for the fiscal year ended June 30, 1940, came to $12,900,000 of which $6,200,000 were Federal funds.

Although the amendments of 1939 increased the maximum grant for Federal matching from $30 to $40, the average pay-

ments made in June 1940 exceeded $30 in only two states. The national average monthly payment per recipient was $23.68; the range extending from $7.95 to $48.02. In thirty-three states where 75 per cent of the recipients reside the average monthly payment per recipient was $15 or over. In twenty-five of these states where 57 per cent of the recipients reside, the monthly average payment was $20 or over. In only three states was the average monthly payment $10 or less and only 5 per cent of all recipients lived in these states.

In spite of this wide range in average payments, the figures for June 1940 show gradual increases for the participating states as a whole. The average payment was higher than for the same month of the preceding year in thirty-one jurisdictions.

The disparity in amount of assistance granted in the various states results from a variety of factors; but a major cause is usually lack of sufficient state resources. In its 1939 report to the President and Congress on proposed changes in the Social Security Act, the Social Security Board recommended a formula for making grants to states on a variable basis related to their economic capacity.

State eligibility requirements, as well as available funds, affect the number of those receiving aid. Age requirements, for example, vary considerably. The Social Security Act makes no mention of age in connection with this program but there is no prohibition against a state establishing such a requirement. In 1939, twelve states had no age requirement, eighteen set the minimum age at from seventeen to twenty-one years, and twelve at sixteen years.

The Federal law sets no minimum requirement for residence though it does provide a maximum which a state may not exceed. The trend in this program has been definitely toward elimination of restrictive residence requirements. In 1936, only about half the participating states had residence provisions more liberal than the maximum in the Federal law; in 1940, more than two-thirds had such provisions. The Federal law does not require citizenship, and there has also been

a trend toward eliminating any citizenship requirement in state plans. In 1936, more than half the states required citizenship; in 1940 only one-fifth retained this requirement.

Some state plans, however, still contain other restrictive conditions, none of which are required by the Federal law. In spite of such restrictions, there is evidence that one major objective of the program, to enable needy blind people to live in their own homes, has been achieved. 85 per cent of those accepted for aid during the year 1938-1939 were living in household groups, 38 per cent with husband or wife, 39 per cent with other relatives only, and 8 per cent with people who were not relatives. Of the 15 per cent not in household groups, 13 per cent lived alone and 2 per cent in private institutions. About one-fourth of the household where there were recipients of aid to the blind also received other forms of public or private aid.

Requirements of a State Plan

According to the terms of the Social Security Act, a state, in order to receive Federal grants for any one of the three public assistance programs must have a plan approved by the Social Security Board. The requirements of an approvable state plan for aid to the blind are stated in section 1002 of the Social Security Act. As amended in 1939, these are:

(a) A state plan for aid to the blind must:
  (1) provide that it shall be in effect in all political subdivisions of the state, and, if administered by them, be mandatory upon them;
  (2) provide for financial participation by the state;
  (3) either provide for the establishment or designation of a single state agency to administer the plan, or provide for the establishment or designation of a single state agency to supervise the administration of the plan;
  (4) provide for granting to any individual, whose claim for aid is denied, an opportunity for a fair hearing before such state agency;
  (5) provide such methods of administration (including after January 1, 1940, methods relating to the establishment

and maintenance of personnel standards on a merit basis, except that the Board shall exercise no authority with respect to the selection, tenure of office, and compensation of any individual employed in accordance with such methods) as are found by the Board to be necessary for the proper and efficient operation of the plan;

(6) provide that the state agency will make such reports, in such form and containing such information, as the Board may from time to time require, and comply with such provisions as the Board may from time to time find necessary to assure the correctness and verification of such reports; and

(7) provide that no aid will be furnished any individual under the plan with respect to any period with respect to which he is receiving old-age assistance under the state plan approved under section 2 of this Act;

(8) provide that the state agency shall, in determining need, take into consideration any other income and resources of an individual claiming aid to the blind; and

(9) provide safeguards which restrict the use or disclosure of information concerning applicants and recipients to purposes directly connected with the administration of aid to the blind.

(b) The Board shall approve any plan which fulfills the conditions specified in subsection (a), except that it shall not approve any plan which imposes, as a condition of eligibility for aid to the blind under the plan—

(1) Any residence requirement which excludes any resident of the State who has resided therein five years during the nine years immediately preceding the application for aid and has resided therein continuously for one year immediately preceding the application; or

(2) Any citizenship requirement which excludes any citizen of the United States.

Bureau of Public Assistance—Responsibilities and Service to States

The Social Security Board's Bureau of Public Assistance has broad responsibilities in this field. It advises the states in the

preparation of their plans, standards, and policies; reviews state plans submitted to the Board; makes recommendations on them to the states and the Board; and keeps the Board informed on continuing developments in this and in related Federal and state services and activities. After a plan is once approved, the Bureau maintains contact with the state agency, not only to assure continuing conformity to the Federal Act, but also to give the state all possible assistance in developing its public assistance program and in working out co-operation with allied programs.

As the operating unit in this field, the Bureau draws upon the Board's service bureaus and on its own staff of special consultants in developing a co-ordinated system of services. Consultants advise on such subjects as staff development, personnel administration, law, research and statistics, auditing, medical care, and home economics. Through the co-operation of the Surgeon General, an opthalmologist from his staff, is assigned to work with the staff of the Bureau of Public Assistance in planning and developing standards relating to health and medical care for applicants and recipients of public assistance. All consultative services are utilized both by the Bureau's own staff, in Washington and in the field, and by the co-operating state agencies.

Like all field services, the regional representatives of the Bureau of Public Assistance work from the Board's twelve regional offices. It is this staff which maintains regular contacts with the state agencies on all matters pertaining to public assistance legislation and administration. In addition to this continuing service and the consultative services available at the states' request, the Bureau conducts administrative studies of state and local operation and of the effect of these programs on individuals. The findings are utilized by the regional representatives and the state agencies as a basis for improving the state program. The Bureau also publishes material growing out of its own and state agency experience for the use of its regional representatives and state staffs.

State Programs—Co-operation and Organization

Co-operation is inherent in the Federal-state basis of the program. But joint planning and action are equally necessary within each state, since at least four state agencies have programs directly affecting the blind or those whose vision is impaired. The decision as to what agency shall be responsible for aid to the blind is entirely a matter for state determination. In most states this program, with other forms of public assistance, child welfare services, and general relief, is administered by the state department of public welfare. In the interest of economy and efficiency, one staff is usually employed to serve all applicants and recipients of public assistance. The limited number of qualified social workers and the desire of the states to make the services of trained personnel available to all needy groups have been important factors in this decision.

The public assistance program of the state welfare department usually operates through three general divisions: the social service division is the operating unit for administration and supervision; the research and finance divisions function as service units. Specialists in various aspects of the work serve in a consultative capacity to the social service division and work through the field staff, which is also under its immediate direction.

Where public assistance is locally administered, the organization generally follows similar lines in administering public assistance, child welfare, general relief, and other provisions. The state field staff supervises and assists the local units, making consultant services available as needed.

It is generally agreed that policies, standards, and methods of work in this field should be determined by a staff of trained social workers who know the content of a good social service program and who will constantly keep in mind the objective of such a program, to give adequate assistance and service to eligible persons in accordance with their individual needs. Every individual has many requirements, for normal family and community life, for health and medical care, for education,

employment, and recreation, to mention only a few. Many of these he can provide for himself, but others must be met through community resources. The case worker, who must visit the recipient regularly to establish his continuing eligibility for assistance, is the logical person to see that insofar as possible the individual or his family receive whatever service is required.

But no one state or local agency is equipped to provide all necessary services. Special knowledge and skills are required in each field. To make the most of these skills, to avoid duplication of effort, and to provide effective well-rounded service to the individual require on a continuing basis careful planning and co-ordination.

The plan of operation recommended by the Social Security Board to the states is essential, for the administration of aid to the blind recognizes this situation and gives an adequate basis for determining certain necessary supplementary services, especially for health, medical care, and vocational rehabilitation.

The Board has also interpreted requirements in the Federal law, developed standards, and required for approval of state plans the following:

1. That blindness, for purposes of eligibility, be defined by state law in general terms of economic blindness and that the state administrative agency be given authority to establish, by rule and regulation, more specific definitions in terms of ophthalmic measurement.
2. That this definition be implemented in its application by:
   a. A report of examination by an opthalmologist or physician skilled in diseases of the eye with regard to each application accepted for assistance or rejected on medical grounds, on a record form provided by the Social Security Board or on one of the state's own design but including required data.
   b. A list of ophthalmologists or physicians skilled in diseases of the eye, whose examinations shall be ac-

ceptable, designated or approved by the state agency.

c. Review and approval of reports of all eye examinations by a supervising state ophthalmologist who has authority and responsibility to decide that an individual is blind and that adequate and acceptable medical information is available to substantiate that fact.

3. That reports be submitted as required by the Social Security Board.

The Board's Division of Public Assistance Research planned and formulated methods and procedures for the collection, compilation and analysis of public assistance data in regular and special series and publishes such information. Recently a plan was developed by this Division in co-operation with the Committee on Statistics of the Blind sponsored by the American Foundation for the Blind and the National Society for Prevention of Blindness, for obtaining regularly, data on the major causes of blindness among recipients of aid. The ophthalmologist and a medical eye social worker of the Bureau of Public Assistance will review all medical data received.

Recently a special study of programs for the blind in one state was made with three Federal bureaus co-operating, Employment Security, Vocational Rehabilitation, and Public Assistance. The medical and social data secured in reports of causes of blindness and suggestions as to effective co-ordination growing out of this state agency study should provide information essential for developing programs of prevention of blindness, improvement and restoration of sight, vocational training and placement, and other services required by blind individuals.

Further developments of the aid to the blind program depend to a large extent on the calibre of the personnel administering the program in the states and localities. Improvement in this area will undoubtedly be accomplished through an amendment to the Social Security Act, effective January 1,

1940, requiring the selection of all public assistance personnel on the basis of merit.

Another 1939 amendment increased Federal grants to states for the administration of aid to dependent children and aid to the blind to one-half the total of the sums expended as the Board finds necessary for "proper and efficient administration." In order to furnish a basis on which the Board can make this determination, the states have been asked to conduct time studies or to indicate by other means how their administrative expenses are distributed.

Next Steps

The Social Security Board, under the authority vested in it by Congress, continuously studies all the programs and recommends ways and means of strengthening them on the basis of such studies. There can be no question that great progress has been made in the first five years under the Social Security Act, in the social insurances, in public assistance and in other services to all the community, including the blind. With effective planning and continuing effort, the next five years should see the number of blind persons greatly diminished through programs of prevention; also the number of blind persons requiring public assistance greatly decreased through broader social insurance protection. For the blind who will need help, the prospects are good that both assistance and service will be adequate and appropriate to their needs.

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Federal Provisions of Benefit to the Blind

Robert B. Irwin

THE recent expansion in welfare work supported by taxation frequently raises questions regarding the relationship between publicly supported and privately supported activities in behalf of the blind, specifically in regard to possible duplication or overlapping of efforts. A study of the situation will show, however, that Federal activities of benefit to the blind in no way compete with or replace the services covered by private agencies for the blind with a nation-wide scope, but rather tend to make these services more effective. To illustrate—the American Foundation for the Blind is a privately supported agency having rather diversified activities. The services of this agency dovetail into some Federal activities supplementing the government's work in such a way that the growth in Federal welfare work increases rather than diminishes the productive character of the privately supported agency. For example, the Library of Congress has been charged with the responsibility for conducting a nation-wide library service for the blind. Very wisely the Library has not undertaken to publish the books which it circulates, leaving it to private, non-profit organizations for the blind, such as the American Foundation for the Blind and certain printing houses for the blind to supply embossed books and books on sound reproduction records. Such agencies, untrammelled by the restricting influence of Federal legislation, are free to conduct research work and experimentation which have brought about rapid improvement in the technical aspects of the manufacture of these books. These private agencies have welcomed the opportunity to co-operate with the Library of Congress in the manufacture of books for the blind. As no profit had to be

included in the price at which the books were sold to the government, it has been possible to increase materially the purchasing power of the appropriations made by Congress for books for the blind. Again, private agencies have co-operated with the Library of Congress by acting in an advisory capacity representing the blind readers in the selection of books and the development of library service.

The special consideration given the blind by the Federal government falls into three categories, fields in which the government has pre-empted a major or exclusive role, such as military service, the post office, and the regulation of interstate commerce; fields where the small number of blind people in any one community make the provision of services by local government subdivisions impractical; and legislation designed to aid other much larger groups and including the blind. In this article only such laws as have a present-day application will be considered.

Pensions

As early as 1862 persons losing their sight in line of military duty were granted a pension. These pensions were later granted to veterans whether or not the loss of sight was in line of military duty. Still later blind children of veterans were granted pensions if they lost their sight under sixteen years of age in the case of children of veterans other than those of the World War, and eighteen years in the case of children of World War veterans. The number of those receiving governmental aid who lost their sight directly or indirectly as the result of military service is small as compared with those of the civilian population who have benefited in one way or another from the Federal government's interest in the blind.

Special Mailing Privileges

The Federal Post Office Department has long been generous to the blind. Because of the bulky character of letters in raised type, Congress permitted the Post Office Department in 1899 to classify letters for the blind as third-class matter when sent

unsealed. In 1904 a law was passed providing that library books for the blind might be circulated through the mails free of charge. Magazines and periodicals for the blind in raised characters when no subscription charge was made and no advertising matter included, were permitted to be carried through the mails free of postage in 1912. A special rate of 1 cent a pound was accorded the Holy Scriptures in 1924. After the advent of the Talking Book similar privileges were extended to Talking Book publications of a like character. Since it often seemed advisable to make a small charge for magazines to prevent waste, a special rate of 1 cent a pound was granted in 1937 to magazines on Talking Book Records when sold at a price not greater than the cost price.

In order to enable blind people living in remote communities to have their Talking Book machines repaired by competent persons, Congress in 1938 authorized the Post Office Department to carry Talking Book machines and parts thereof through the mails at the rate of 1 cent per pound when shipped for repair purposes.

Transportation

Many blind people who do not feel they can safely travel alone arrange to be accompanied by a guide. Until 1927 this involved the payment of double transportation costs. Sightless people generally speaking belong to the low income section of society. This excess cost of transportation imposed a very serious burden on people who could ill afford to bear it. The railroad companies and other common carriers were willing to permit a blind person and his guide to travel for one fare, but such a concession was expressly forbidden by the terms of the Interstate Commerce Act. In 1927 the Act was amended so as to permit the railroads to treat blind travelers as exceptional cases and allow them to be accompanied by a guide without paying an additional fare. The railroads soon took action under this permissive clause in the Act though some of them require a blind traveler and his guide to pay one full first-class fare even though he may ride in the day coach. Many of the bus

companies have also acted under this permissive arrangement, some carrying a blind person and his guide for one fare; others for one and one-half fares. In 1937 the Interstate Commerce Act was still further amended to permit the common carriers to allow a blind person to take his guide dog with him without an additional transportation charge.

School Books and Apparatus

By 1878 it became apparent that the few thousand blind school children of the country would never receive an adequate supply of school books and tangible apparatus essential in their instruction if each state were left to its own resources in the development and manufacture of such books and appliances. Accordingly, the American Printing House for the Blind in Louisville, Kentucky, a private corporation not for profit sponsored by the State of Kentucky, received a governmental grant of $10,000 per annum on condition—first, that the superintendents of the various tax-supported schools for the blind of the country became ex-officio members of its board of trustees; and second, that books and tangible apparatus equivalent in value to the governmental grant be distributed among the schools for the blind of the states and territories of the United States and the District of Columbia in proportion to their pupil enrollment. The Federal grant was increased from time to time until at present it is $125,000. The term "books and tangible apparatus" includes not only books, embossed maps, and braille writing paraphernalia, but also sound-reproduction records (Talking Books) and their reproducers.

Library Service

An important manifestation of the government's interest in the blind has to do with library service. The free circulation of library books through the mails has already been mentioned. Under this incentive scores of libraries were set up by local communities which very generously lent not only to blind people living in the taxing district supporting the library,

but also to blind people in other districts where local library service for the blind had not been established. Gradually it became evident that a system of this kind or, rather, a lack of system resulted in very inadequate and spotty service. A few large communities made substantial appropriations for books. Most of the blind of the country were dependent upon those few communities for library service, and some blind people lived as much as a thousand miles from the nearest library of books in raised type. At the request of the American Library Association, the American Foundation for the Blind made a study of this entire subject in 1929. As a result of this survey, the Foundation recommended that the Federal government assume responsibility for providing books to certain well-located regional libraries throughout the country on condition that these libraries undertake to circulate books for the blind over given areas, regardless of whether or not the area extended beyond the taxing unit supporting the library. Accordingly, in 1931 Congress passed an Act commonly known as the "Pratt-Smoot Law" which authorized an appropriation of $100,000 annually to the Library of Congress for books for the adult blind, these books to be deposited in libraries serving large regions often including several states. This plan has worked well, and today there are twenty-seven regional libraries distributed with some relationship to density of population from Massachusetts to Hawaii. This gave a tremendous impetus to the publication of books for the blind. Heretofore publishers of books in raised type, none of whom operated for profit, were dependent upon a few inadequately financed libraries for the sale of their products. As a result few books were published unless they were paid for in advance by philanthropic individuals or organizations.

After this enlarged nation-wide library service had been in operation for a short time, it became evident that only a small percentage of blind people could read books in raised type with sufficient facility to benefit very greatly from the libraries of embossed books provided by the government. A study showed that less than 10 per cent of the blind population was

using the embossed libraries, and probably less than 20 per cent could make any satisfactory use of raised type. Accordingly steps were taken to develop a new reading medium for the blind. An approach through the ear was substituted for touch reading, and a long-playing phonograph record invented by Frank L. Dyer was perfected by the American Foundation for the Blind. Members of Congress, conspicuous among whom were Kent Keller, Caroline O'Day, Ruth Pratt, Reed Smoot, and Robert F. Wagner, were interested in the subject. The appropriations for books for the adult blind were gradually increased until the annual amount authorized at present is $350,000, $250,000 of which is allotted to the publication of so-called Talking Books—books recorded on sound-reproduction records—and $100,000 for books in raised characters. The American Foundation for the Blind made its recording studios available to the Library of Congress for the recording of Talking Books so that the cost could be kept to a minimum.

The schools for blind children soon realized that the Talking Book had a place as an educational medium. The American Printing House for the Blind set up a sound-recording department to supply the demand for such equipment, and also offered its recording facilities to the Library of Congress.

Talking Books require for their reproduction a special type of phonograph not available on the market. As most blind people are not in a financial situation which permits them to meet the cost of such reproducers (Talking Book machines) even when manufactured and sold without profit, the Work Projects Administration was prevailed upon to set up a project for the manufacture of such machines under the supervision of the American Foundation for the Blind. This project is sponsored by the Library of Congress and the machines when produced are the property of that library. The machines are allotted to the various states in the proportion that their general population bears to the total population of the United States. The local agency for the blind in each state (usually the state department for the blind) takes responsibility for maintaining

and lending these machines to blind people free of charge. Under this project over 20,000 Talking Book machines have been produced—five times as many as have been purchased by blind people who were in a position to buy their own. Today the library circulation of Talking Books exceeds that of braille books though the number of titles available is less than one-tenth of those in embossed type.

Categorical Relief

The original draft of the Social Security Act providing categorical assistance to the aged and others did not include the blind. Upon the recommendation of the American Foundation for the Blind, Title X extending assistance to the blind was incorporated into the Act. Today the Federal government matches the amount expended by the states for monetary assistance to the blind to an amount not exceeding $20 per month to any individual. The Federal government further meets half the cost of the administration of such aid. In spite of many legal and practical limitations the Social Security Board is endeavoring to give to the operation of the Social Security Act the most advanced thought in the field of administration of monetary relief. It is to be hoped that certain points will be borne in mind by those responsible for dispensing funds under Title X: First, that the blind were selected by Congress for special consideration because it was felt they would not receive adequate treatment under any plan for providing aid on a strictly subsistence basis; second, that blindness imposes limitations to offset which requires the expenditure of money for services not necessary to persons with sight; third, that unlike those receiving old age assistance many blind people on relief rolls have most of their life ahead of them and that therefore every opportunity should be given them for growth and self-expression; and fourth, that the assistance to the blind should be so administered as not to discourage industry, for if blind people are stimulated to work they not only become more contented citizens but many of them also

eventually place themselves in an economic situation where they are no longer charges on the public for their support.

Governmental Purchases of Blind-Made Products

A large number of the blind people of the United States who are forced to ask for public relief are capable of performing productive labor if opportunity for employment is offered. There are many sheltered workshops for the blind throughout the country, but their capacity to provide employment is seriously restricted because of the limited market for their products. Many articles bought regularly in large quantities by the Federal government can be manufactured in workshops for the blind and sold at a fair market price. In 1938, at the recommendation of the American Foundation for the Blind, the so-called Wagner-O'Day Act was passed. This Act requires Federal departments to purchase their brooms, mops and other suitable commodities from nonprofit agencies for the blind. It sets up a committee appointed by the President known as the "Committee on Purchases of Blind-made Products" consisting of representatives of various Federal departments and a private citizen conversant with the problems of the employment of the blind. This committee determines what constitutes "suitable commodities" and sets a fair market price for such articles. The committee requested the American Foundation for the Blind to co-operate in the administration of this law by taking responsibility for the allotment of orders among the scores of workshops for the blind so that the work might be equitably distributed and orders placed in such a way that the government might be promptly and efficiently served. Accordingly, the Foundation organized an affiliated nonprofit agency known as "National Industries for the Blind" which is performing the desired functions. National Industries for the Blind has an active advisory committee of workshop managers, and serves not only as an allotting agency but also assists in many other ways in bringing about co-operation among workshops for the blind as well as furthering joint efforts at mutual improvement. The law has so enlarged the market for the

products of the workshops for the blind that several hundred blind people are now afforded remunerative employment at reasonable wages and most of these workmen are removed from the relief rolls. The Act has been of inestimable value in giving sightless men and women the joy and satisfaction of earning their own daily bread without increasing the operating costs of the government.

Vocational Rehabilitation

In 1920 Congress enacted a law authorizing the appropriation of $1,000,000 to be used in matching of funds expended for the vocational training of "persons who, by reason of a physical defect or infirmity are totally or partially incapacitated for remunerative occupation." Since then the authorized appropriation has been increased to $3,500,000. While this law was not designed primarily to provide vocational training to the blind, a certain amount of vocational training has been afforded blind people as well as other physically handicapped persons in most states. In a few states the blind are specifically exempt from the benefits of the State Vocational Rehabilitation Act, and as a result there is no Federal matching of state funds for this purpose. In many states the State Vocational Rehabilitation Department co-operates with the state agency for the blind in meeting a substantial part of the cost of vocational education of many adult blind persons. One half of such expense is met by the Federal government.

Vending Stands in Federal Buildings

One of the most remunerative lines of activities for the blind has been the operation of small places of business. Hundreds of blind people throughout the country are earning a comfortable living as proprietors of vending stands handling such articles as newspapers, magazines, cigars, candies, etc. As such places of business are small, a blind operator may learn where every article is located and without any difficulty serve his customers expeditiously. For many years blind people and their friends looked longingly upon the lobbies of the post

offices and other Federal buildings realizing what excellent locations for vending stands many of them were. The Post Office Department, however, frowned upon the installation of such stands in these lobbies though some other Federal buildings granted seeing business men concessions to operate stands in their lobbies on the conviction that by so doing a convenience was being extended to the employees working in the buildings.

In 1936 a law commonly known as the "Randolph-Sheppard Act" was passed by Congress reading in part as follows: "That for the purpose of providing blind persons with remunerative employment, enlarging the economic opportunities of the blind, and stimulating the blind to greater efforts in striving to make themselves self-supporting blind persons licensed under the provisions of this Act shall be authorized to operate vending stands in any Federal building where, in the discretion of the head of the department or agency in charge of the maintenance of the building, such vending stands may be properly and satisfactorily operated by blind persons."

In order to set up a control of the stands and to insure their being operated in such a way as to provide a maximum benefit to the blind and to the employees in the buildings without detracting from the appearance of the buildings, the administration of the Randolph-Sheppard Act was assigned to the Rehabilitation Department under the U.S. Commissioner of Education. Operators of these vending stands are licensed by a state agency (usually a state department for the blind), and the entire project is under the supervision of an especially designated personnel in the office of the Commissioner of Education. As the equipment of these stands must conform to the architectural lay-out of the buildings in which they are located, the cost of the equipment is frequently rather high. Funds to meet this cost are usually provided by the state licensing agency. Unfortunately appropriations for this purpose have frequently been inadequate. Efforts have been made to have the law so amended that the Federal government might provide the stand fixtures and treat them as a part of the build-

ing housing them. When some of the financial obstacles have been disposed of, several hundred blind people will be earning a fair living wage under the provisions of the Randolph-Sheppard Act. In spite of the difficulties attendant upon the inauguration of a new undertaking, scores of sightless people are already earning sufficient to remove them entirely from the relief rolls. Gradually the good example set by the Federal government is being followed by municipal and county authorities, and vending stand concessions are being granted to blind people in many local public buildings. This is a practice which is both good financial policy and sound philanthropy. It should be extended until every public building affording sufficient patronage to support a stand operator contains a vending stand concession operated by a blind person.

U.S. Office of Education and the Blind Child

The concern of the Federal government for the education of blind children did not cease with the provision of school books for their use. For many years the U.S. Commissioner of Education has collected statistics regarding blind pupils, and has from time to time issued bulletins regarding the progress of educational work for the blind in this country. In 1930 there was established under the Commissioner of Education a Division of Special Problems. This Division conducts research, and gives consultative service to state, county and city school systems and to residential schools throughout the country in the interest of all handicapped children, including the blind and the partially seeing; and through conferences, field service, bibliographies, and other publications stimulates the organization and development of educational programs which will meet the needs of children requiring special instructional methods and special guidance procedures.

Summary

From the foregoing it will be noted that government services to the blind were arranged for from time to time without much reference to any preconceived plan. They were provided

either to meet a need which could not be supplied locally or to extend to the sightless services already provided to other kindred groups. Future development will probably be along the lines already laid down. For example, low mailing privileges should be extended so as to include braille typewriters and other special apparatus used by the blind which usually cannot be satisfactorily repaired locally. The matching of state funds should be extended to include not only money expended for relief but also for services. Until some such action is taken, it is doubtful if there will be anything approaching uniform services to the blind throughout the country.

Suggested Readings

McKay, Evelyn C. "Federal Legislation for the Blind." *American Association of Workers for the Blind*, 1937. pp. 26-32.

Authors' Who's Who

Charles Magee Adams, blind from the age of eleven, is well known as a newspaper editor and as a contributor of special articles to magazines of national distribution. A graduate of the Ohio State University School of Journalism, Mr. Adams has been a shining example for other blind persons in the exacting field of professional writing.

Dr. Berthold Lowenfeld acquired his experience in work with the blind and in child psychology in several positions of responsibility in Vienna, Austria. He studied American methods of educating the blind as a Rockefeller Research Fellow in 1930-1931, and is now on the staff of the American Foundation for the Blind.

Dr. Samuel P. Hayes, formerly head of the Department of Psychology of Mount Holyoke College, and now in charge of the Department of Personnel and Research at Perkins Institution, is recognized as an authority on the psychology of blindness. He has done extensive research in the field and has for a long time served as consultant psychologist for the American Foundation for the Blind and in similar capacity at Perkins Institution and at the Pennsylvania Institution for the Instruction of the Blind.

Mrs. Jessie Whitney Mayshark is head of the Department of Special Education at Perkins Institution and Massachusetts School for the Blind, where she is doing valuable work with slow pupils. Before joining the Perkins staff, Mrs. Mayshark was principal of elementary schools in Gardner and Belmont, Massachusetts.

Dr. Gabriel Farrell, for ten years has been Director of Perkins Institution and Massachusetts School for the Blind. Although Perkins has received deaf-blind children for over one hundred years, a definite department with special teachers and facilities has been organized by Dr. Farrell. He is a

Trustee and Secretary of the Board of the American Foundation for the Blind.

Dr. Richard Slayton French is Superintendent of the California School for the Blind and Lecturer in Education at the University of California. Among those interested in the blind Dr. French is especially known for his pioneer work in research into the history of the education of the blind, and in publication of professional literature on work for the blind, exemplified in such publications as *The Education of the Blind* and *From Homer to Helen Keller*.

Dr. David H. Morgan is Teaching Principal of the California School for the Blind. Besides his work with the blind Dr. Morgan has had experience in other fields, particularly as Lecturer in Education at the University of California. He is the author of several articles on the education of the blind and on eye movements in reading.

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Colonel E. A. Baker, O.B.E. is Managing Director of the Canadian National Institute for the Blind with headquarters in Toronto, Canada. He lost his sight in the first World War. After a short training period at St. Dunstan's in London, he returned to Canada where the high standard of work for the blind is largely due to his organizing talent and leadership.

Coburn L. Broun has been Director of the Bureau of Employment of the New York State Department of Welfare, Bureau of Services for the Blind, since 1929. Mr. Broun's long experience as a business executive before the loss of his sight makes him especially qualified to meet the many difficult problems encountered in placement work with the blind.

Peter J. Salmon, a graduate of Perkins Institution, is Secretary and Assistant Director of the Industrial Home for the Blind, Brooklyn, New York. Mr. Salmon's marked success in meeting the problems growing out of production and sale of articles made by the blind has attracted nation-wide attention.

Mrs. Mary Dranga Campbell is Executive Director of the Division for the Blind of the Seeing Eye, Inc. in Morristown, New Jersey. Her former experience includes positions as Superintendent of the Ohio School for the Blind and Executive Director of the Missouri Commission for the Blind and of the Pennsylvania State Council for the Blind. She was Associate Editor of the *Outlook for the Blind* in the early days of its publication.

Evelyn C. McKay is Social Research Secretary of the American Foundation for the Blind. Her early statistical experience includes responsibility for a cost of living study at the University of California, work in transportation statistics, and two years of statistical research in the field of public health. Since the appointment of the Committee on Statistics of the Blind in 1931, she has served as its Secretary, and has contributed many articles and reports on the subject to various professional publications.

Jane M. Hoey is Director of the Bureau of Public Assistance, Social Security Board, Washington, D. C. Her former experience includes a wide range of responsible positions in

public and private fields of social work. When Assistant Director and Secretary of the Health Division of the Welfare Council of New York City, she also served as a member of the New York State Crime Commission, and has been active in other fields of correction and parole work. She is at present President of the National Conference of Social Work.

Robert B. Irwin has been connected with practically all progressive developments in work for the blind for the last twenty-five years. He is now Executive Director of the American Foundation for the Blind, where much of his attention is given to the promotion of legislation of benefit to the blind.

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